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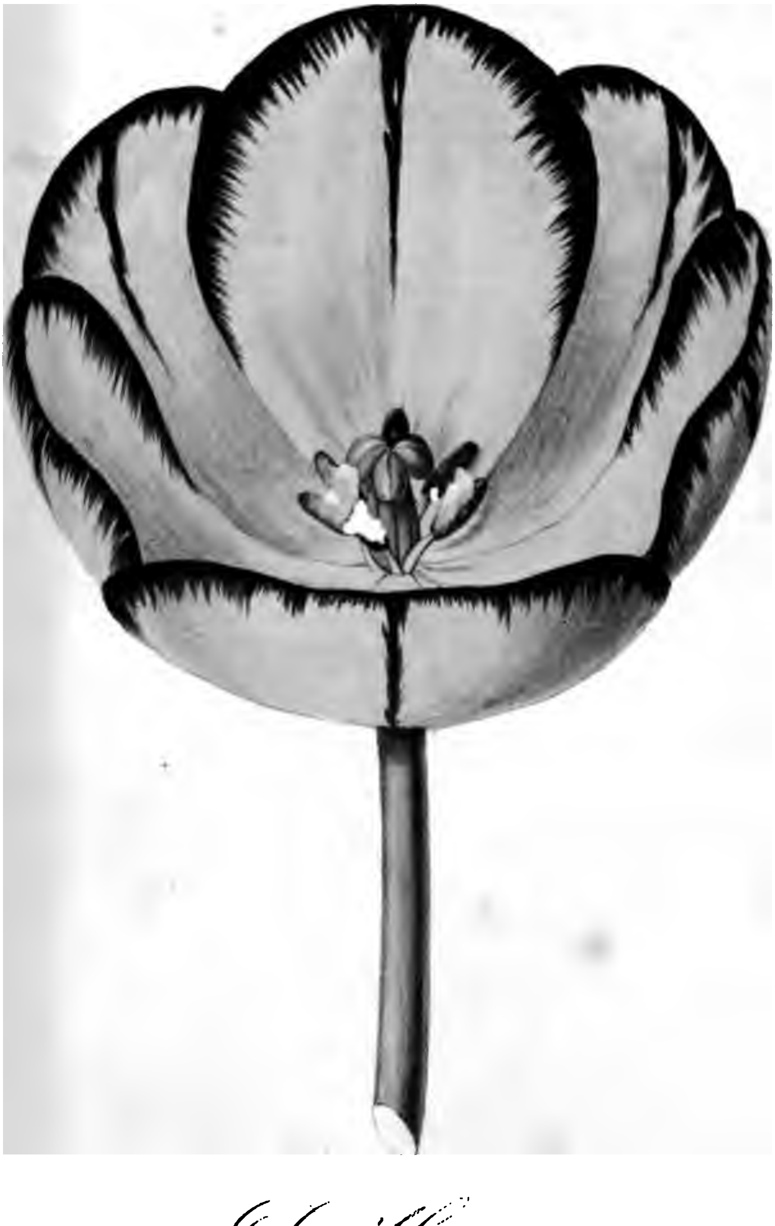

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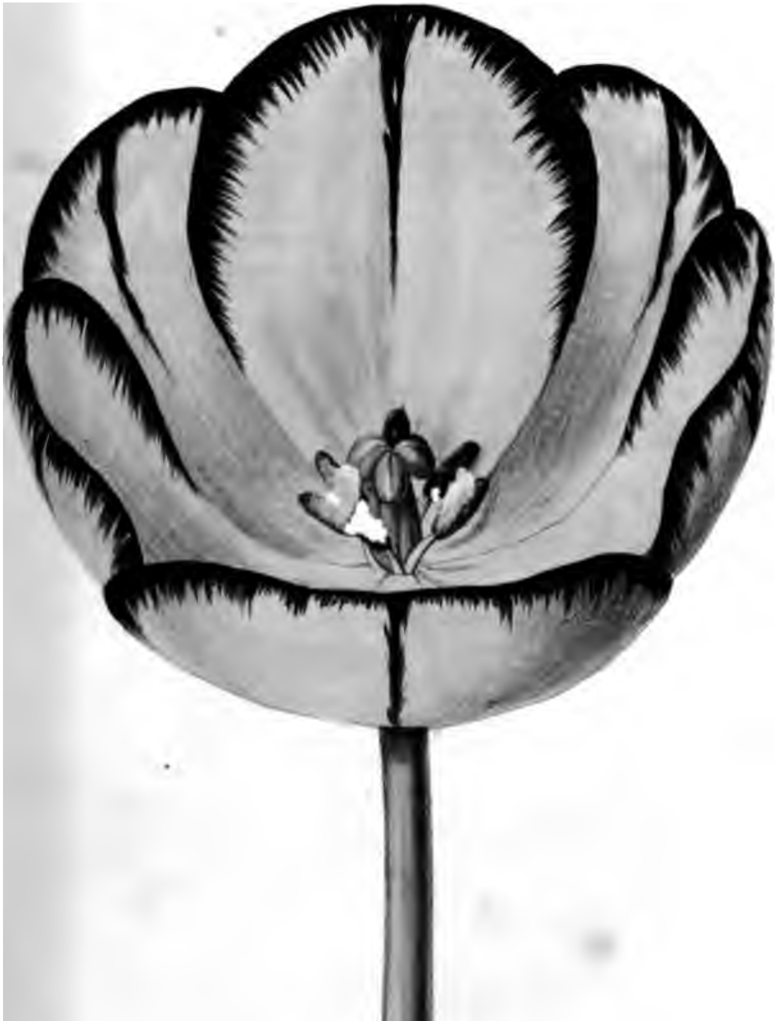

Dr. Horner

THE
FLORICULTURAL CABINET

&

FLORIST'S MAGAZINE

1851.

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THE

FLORICULTURAL CABINET,

AND

FLORISTS' MAGAZINE.

JANUARY TO DECEMBER, 1851.

CONDUCTED BY

JOSEPH HARRISON.

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PREFACE.

WE have again arrived at the close of another year's volume of the FLORICULTURAL CABINET, and the agreeable duty now devolves upon us of recording the usual annual address to our correspondents and readers.

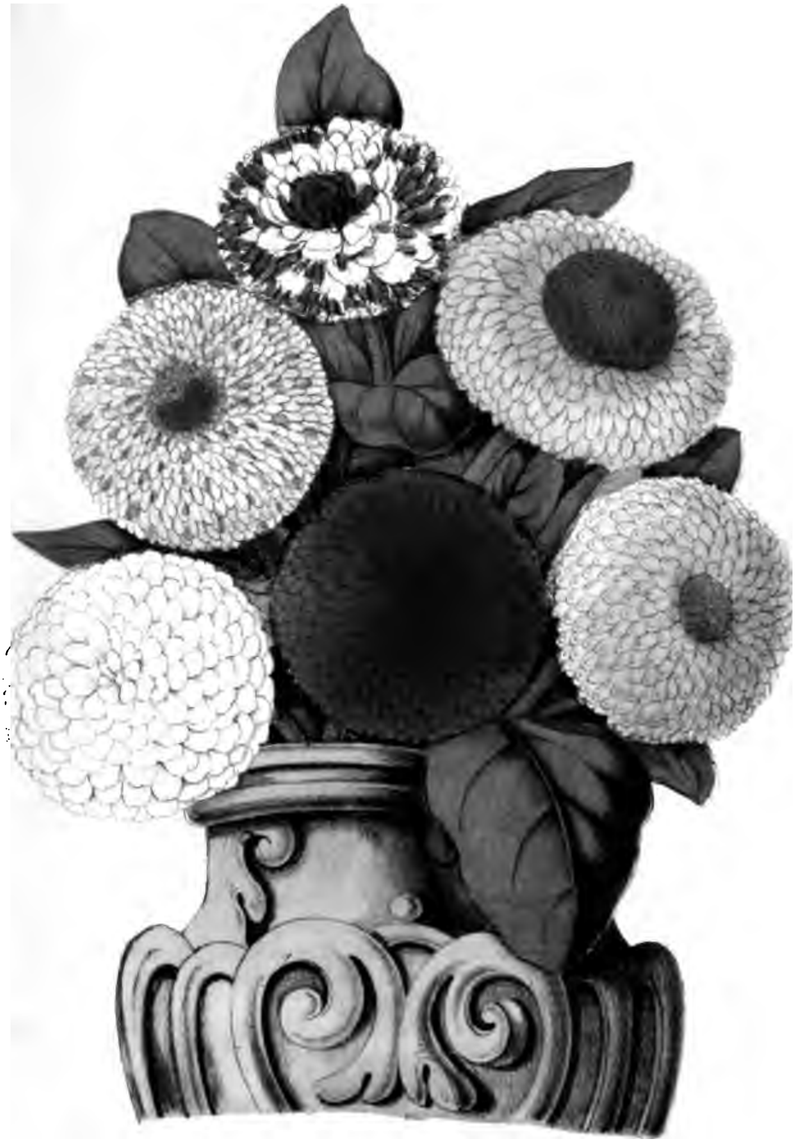
It has been with feelings of the most flattering description that we have presented the previous eighteen volumes. The continually increasing support we have received during the present year, and by which we have been enabled to complete the nineteenth volume, we are free to acknowledge a proportionate increase in the debt of gratitude is due from us to our contributors and readers. To them we most respectfully tender our thanks for the encouragement which has so liberally been afforded us, and in the succeeding volume our utmost exertions shall be directed to render it increasingly interesting and useful, so that it may be worthy of their continued confidence and support.

Aware that many of our readers have not the opportunity of frequently visiting large collections of plants, nor have the means of ascertaining the continued introduction of new plants, we have therefore paid considerable attention to obtain particulars of all such as are received from time to time in the large establishments of our own country, as well as those on the Continent, from whence such new plants can now be so easily procured. We also feel assured that many of the most showy-flowering plants of prior introduction are unknown to numbers of our readers, and we have, in consequence, given particular descriptions each month of such plants as we consider merit a place in even any select collection. No other periodical contains anything near such a number of described new or valuable plants. Conscious of its usefulness, we shall pursue the same course successively.

We shall be glad at all times to receive suggestions on any subjects calculated to improve our future volumes; and the repeated kindness of our contributors and readers, we think, justifies our expectations as to their future assistance. By the aid of a generous FLORAL PUBLIC we have been enabled to attain the elevated position we occupy, and our utmost energies shall on all occasions be employed to retain it.

The recommendation by our friends of the FLORICULTURAL CABINET to others will prove an increasing stimulus to our exertions.

Richmond, *26th November* 1851.



New varieties of Daisies.

JANUARY, 1851.

ILLUSTRATIONS.

NEW VARIETIES OF DAISIES (BELLIS PERENNIS).

THE generic name Bellis is stated in fabulous history to be derived from the circumstance of *Belides*, a grand-daughter to Danaus, and one of the nymphs called Dryads, that presided over the meadows and pastures in ancient times. Belides is said to have encouraged the suit of Ephigeus; but, whilst dancing on the grass with this rural deity, she attracted the admiration of Vertumnus, who, just as he was about to seize her in his embrace, saw her transformed into the humble plant that now bears her name.

An old astrological writer informs us that this plant is under the sign Cancer, and under the dominion of Venus, and therefore good to cure all the pains caused by the fair goddess, particularly those of the breast: hence it becomes all the *lack-a-daisy* swains to give thanks that this plant is so bountifully provided as a remedy.

The name Bellis is now deduced from the Latin *bellus*, handsome, or pretty. Others are of opinion that it was called *Bellis a bello*, from its being found useful in the field of battle to heal the wounds of soldiers, and on which account it has also been called *Consolida*. The name *Daisy* is derived from a Saxon word: it means Day's-eye, in allusion to the flower expanding when the sun rises upon it and closes at sunset.

In France the flowers are called *Paquerettes*, because the blossoms appear most abundant at the approach of *Paques* (Easter). The plant, too, is named *Marguerite* (Pearl), and by some Pearl of the Day. It is stated, St. Louis took for a device on his ring a Daisy and a Lily, in allusion to the name of the queen his wife, and to the arms of France, to which he added a sapphire, on which a crucifix was engraved; the motto, "That it held all he counted most dear," viz., "Religion, France, and his spouse."

We do not recollect any flower that we could introduce as our first ornament for the New Year that would be so *universally admired* as the one we have selected. For who can see the flower, or a coloured figure of the Daisy, without a thousand delightful associations of infancy. To those who have passed their early days amongst Daisy-spangled meadows, the very *name* will seem to renovate the imagination and carry them back to their earliest pleasures. This pretty flower is the favourite of all: it may be styled, "The Robin of Flowers." Turn the blossom all ways, and on every fresh view new beauty appears.

No other flower has been so frequently celebrated by our best poets: Milton says—

"By dimpled brook and fountain brim,
The wood nymphs deck'd with Daisies trim,
Their merry wakes and pastimes keep."

The Daisy has been made the emblem of innocence, because it contributes more than any other flower to infantile amusement and the joys of childhood. Cowper says—

"——— in the spring and playtime of the year,
That calls the unwonted villager abroad
With all her little ones, a spontaneous train,
To gather kingcups in the yellow mead,
And prink their hair with Daisies."

Shakespeare celebrates this flower in his favourite song to spring—

"When Daisies pied, and violets blue,
  And lady flowers all silver-white,
And cuckoo buds of yellow hue,
  Do paint the meadows with delight."

Montgomery says—

"There is a flower, a little flower,
  With silver crest and golden eye,
That welcomes every changing hour,
  And weathers every sky.

And this small flower, to nature dear,
  While moon and stars their courses run,
Wreaths the whole circle of the year,
  Companion of the sun.

* * * *

'Tis Flora's page, in every place,
  In every season, fresh and fair,
It opens with perennial grace,
  And blossoms everywhere.

On waste and woodland, rock and plain,
  Its humble buds unheeded rise.
The Rose has but a summer reign,
  The Daisy never dies."

Wordsworth says, on viewing the Daisy—

"If stately passions in me burn
And one chance look to thee should turn,
I drink out of an humbler urn.
A lowlier pleasure;
The homely sympathy that heeds
The common life our nature breeds,
A wisdom fitted to the needs
Of hearts at home.

When smitten by the morning ray,
I see thee rise alert and gay;
Then, cheerful flower! my spirits play
With kindred gladness.
And when at dusk, by dews opprest,
Thou sinkst, the image of thy rest
Hath often eased my pensive breast
Of careful sadness."

The above lines of the poets named are but small specimens of what they, and many others, have wrote about this pretty flower in its native state so universally found. We have now, however, to notice the Daisy producing double flowers; and in that state is one of the prettiest, lowly ornaments of the flower-garden, or (in suitable places) the pleasure-ground.

The Daisy is what Botanists term, a compound flower, consisting of a number of small yellow florets placed upon one common receptacle (like a number of cups upon a stand); each flower contains about 150 of these florets. The centre ones are tube-shaped, and those at the margin of a flat form. It is stated that the first double-flowered Daisy originated by Vertumnus selecting a very beautiful one in a meadow, which he removed to his garden, and particular attention was paid to promote its growth. The effect of growing it in a richer soil was, the yellow florets were transformed into petals, and thus became completely what is termed a double flower.

Whilst some have only flat-shaped petals, others are formed of little pipes, or quills, and are termed Double-quilled Daisies. The most curious variety is the Proliferous Daisy, commonly called the Hen and Chicken Daisy, because the flower is surrounded by a number of smaller flowers, which are produced from the sides of the principal flower, but out of one and the same calyx.

Our respected correspondent Mr. P. Mackenzie, of West Plean in Scotland, favoured us with some remarks on the double-flowered Daisies, which are inserted in vol. ix., p. 270, and he observes that it was the common opinion that there were only five or six varieties; but at a recent meeting of the West Plean Horticultural Society there were twenty varieties exhibited, prizes having been offered for the best collection. On the Continent very considerable attention has been paid to obtain improved varieties, and there now are upwards of 105 distinct kinds. M. Louis Van Houtte, nurseryman, of Ghent, possesses a most extensive collection, which includes all the best varieties. Those we now figure are some which he has selected and figured in his "Flora of the Gardens of Europe." We need not say they are beautiful, and deserving a place in every garden; many of them are like miniature Dahlia flowers, or Ranunculus blooms. They are easily cultivated, flourishing in a good loamy soil, and readily increased by division. They succeed well in pots; and, by keeping a stock potted off at various periods of the year, a succession of bloom may be had all the year round, and patches may be plunged in the flower-beds or borders, or otherwise placed as lovely ornaments. We hail with pleasure the appearance of these new varieties, and suggest to our readers in this country that attempts to raise improved kinds will afford them delight, and the results will amply repay for their care. We anticipate the appearance of still greater beauties, and that this pretty flower will take its position at our floral exhibitions. Wordsworth, the late Poet Laureate, writing upon it, prophetic says—

"Child of the year! that round dost run
Thy course, bold lover of the sun,
And cheerful when the day's begun
As morning leveret:
Thy long-lost praise *thou shalt regain*,
Dear shalt thou be to future men
As in old time;—thou, not in vain,
Art Nature's favourite."

(We always feel gratified in attempts to encourage our young friends in the cultivation of flowers, and have therefore extended our remarks on this infantile pet flower.)

NOTES ON NEW OR RARE PLANTS.

Achimenes Bodneri.—A continental variety; dwarf, and blooms freely. Each blossom is about an inch across, of a lilac-purple, with a small yellow eye. Pretty.

Achimenes Baumanni.—Another continental variety; dwarf, free bloomer. Each flower an inch across, of a bright rosy-purple colour, and a small yellow eye.

Barbacenia Rogierii.—A plant of the Day Lily order, which has recently been obtained from Mr. Van Houtte by some of the nurserymen in England. It requires to be cultivated in the stove. The flower-stems rise a foot high, each having but one blossom. The tube-formed portion is an inch long, the lower half greenish-yellow, and the other pale-purple; but the five large-lobed end divisions, properly called the segments of the limb, are of a rich velvet-like purple. Each flower is three inches across. It is a beautiful flowering plant. (Figured in *Mag. of Botany.*)

Bertolinia maculata. Spotted-leaved (Syn., Eriocnema æneum).—A native of Brazil, which has bloomed in the stove at the

Royal Gardens of Kew. It belongs to the Melastoma order of plants. The plant is a creeper, rooting at the joints. The flower-stem rises two or three inches high, terminating in a one-sided raceme of flowers. The leaves are large, and the upper side is of a rich glossy green, shading to a coppery or velvet hue, which with its many distinct veins produce a pretty effect. The under side is of a bright rosy-pink, and contrasts well with the upper. Each blossom is about an inch across, rose-coloured. A very interesting plant. (Figured in the *Bot. Mag.*, 4551.)

Burlingtonia pubescens.—A charming stove orchideous Epiphyte from Pernambuca, obtained by John Knowles, Esq., of Manchester. The flowers are produced in what is called a many-flowered panicle. They are of a snow-white, with the lips having three yellow ridges. A very desirable species.

Centrosolenia glabra.—A stove Gesneriaceous robust plant. The flowers are of a very broad tube-shaped form, an inch and a half long, the limb (mouth) being an inch across. White with a sulphur-coloured tube. It blooms during autumn and winter in the Royal Gardens of Kew. (Figured in the *Bot. Mag.*, 4552.)

Cestrum calycinum.—A native of Buenos Ayres. It is a greenhouse shrub, somewhat like a dwarf Olive-plant. The flowers are produced along the ends of the shoots, tube-shaped, an inch long, green, and deliciously fragrant. It blooms freely, and, being an autumn and winter flowering plant, renders it additionally valuable. Many of our readers will know the C. aurantiacum, with its charming orange-coloured flowers, blooming also at the same season: both species ought to be in every greenhouse. They grow freely, and are easy of cultivation.

Cyclamen macropus. Large-rooted.—It is a greenhouse species, grown in the Belgium collections. It is a perennial having many-crowned fleshy roots as large as a moderate-sized turnip. The leaves are large, and have very distinct white veins. The flowers are large, and the tube is of a pretty rose colour, and the top divisions are white. They are produced, usually, in winter, and are very fragrant.

Epidendrum longipetalum (Syn. E. aromaticum).—It is a native of Guatemala, from whence it was received by the Horticultural Society. The flowers are produced in a long straggling panicle. Sepals and petals narrow, an inch and a half long, of a brownish-purple colour, tipped with green. The labellum is white, with the lip margined with bright yellow, and striped with rosy-crimson. The plant is very fragrant. (Figured in *Paxton's Flower Garden*, 30.)

Gillies Poinsiana (Syn., Poinsiana Gilliesii).—A half-hardy shrub, a native of Chili, and the flowers are of the pea-formed order. The foliage is of the Acacia or Mimosa character, and very pretty. The flowers are produced in large terminal spikes. Each blossom is about an inch and a half across, yellow. The fine heads of bloom are very showy. A fine plant, trained against a wall in the open air at Messrs. Knight and Perry's nursery, King's Road, Chelsea, bloomed the last summer. It will probably require a slight protection during winter. It is a fine plant, and deserves to be against every conservatory wall. The numerous stamens are nearly four inches long, a rich crimson colour, and add to the beauty of the plant. (Figured in *Paxton's Flower Garden*, 28.)

GLADIOLUS GANDAVENSIS, VAR. CITRINUS.—This variety is in form and size similar to the species, but the flowers are of a full citron-yellow colour, with a red stripe down the middle of each of the three lower segments of the flower. It is a vigorous grower, and blooms profusely. It is in M. Van Houtte's fine collection of this tribe of flowers.

GLADIOLUS NATALENSIS, VAR. OLDFORDIENSIS.—The flowers are large, of a delicate salmony flesh colour, marked with purple. A superb variety, raised by Mr. Cole, of Oldford.

GLADIOLUS NATALENSIS, VAR. ROSEA-PURPUREUS.—The flowers medium size, of a deep rosy-red, marked with deep purple-red. Very showy. Also raised by Mr. Cole.

MONARDA ALBIFLORA. WHITE-FLOWERED —A handsome, hardy, herbaceous perennial plant; grows three feet high. The floral leaves (bracts) are long, of a greenish-white in the middle. The flowers are in verticillate heads, white, with greenish-white calyxes. In the Botanic garden at Leige. A very desirable species, also fragrant.

MONARDA AMPLEXICAULIS.—A beautiful, hardy, herbaceous perennial, growing two feet high. The upper leaves have the nerves and veins of a beautiful purple-red. The floral leaves are pale-green tinged with red. The flowers are produced round a terminal head. Each blossom is about an inch long, tubular, white tinged with rose, and the lower lip beautifully marked with four rows of purple spots. Blooms freely from May to September, and like others of this genus, if a portion of the stems be cut back early in May, they push fresh shoots, which bloom to the end of the summer. It is grown in the Botanic garden at Leige, in Belgium. A very desirable plant for every flower garden.

MONARDA CONTORTA. TWISTED-FLOWERED. — An herbaceous hardy perennial, grows three feet high. The floral leaves (bracts just under the flowers) are of a reddish-purple, or violet with green tips. The flowers are produced in whorls, two or three on a stem. The calyx is red, and the corolla, which is two-lipped, is of a deep rosy-purple. The plant is fragrant. A handsome species, in the Botanic garden at Leige.

OXYSPORA VAGANS (Syn., Melastoma rugosa).—Dr. Hooker collected seeds of this beautiful flowering shrub in the hilly country bordering on Darjeerling. The plant grows from three to five feet high, having long bending branches. The flowers are produced in large, branching, terminal panicles. Each blossom is about an inch across, of a very bright rosy-red colour. It has bloomed beautifully in the Royal Gardens of Kew, in a medium stove temperature: it deserves a in every one. From its habit we think it would succeed well in mish greenhouse. (Figured in *Bot. Mag.*, 4553.)

SSIFLORA MEDUSÆA.—M. Van Houtte possesses this interesting es. It is a stove-climber, of medium habit. It is an abundant ier, each flower being two inches across. Sepals green. The ents (termed *the rays of the coronet*) are of a bright orange colour they first expand, but afterwards change to a rose or lilac. A very esting species.

CHIRA LONGIFLORA.—This fine looking tree is of the Bombaceæ (Bombax, Silk Cotton Tree). In the Palm-house, at the Royal ens of Kew, it has rapidly grown twenty-five feet high, and seems soon to double that height. Leaves large, each being composed m seven to eleven leaflets on one central leaf-stalk. A plant, one high, bloomed. The five petals were each about an inch broad ight long, the ends reflexing very similar to some of the Crinums. ery numerous stamens (being of the same class as the St. John's), as long as the petals, standing prominently forward, of a rich olour, produce a fine appearance. This puny plant bearing so a flower, it is supposed the full-grown trees will be much larger. ll, in such circumstances, be a magnificent object. (Figured in *Mag.*, 4549.)

ARBITIS LIMBATA. BORDERED MAJOR CONVOLVULUS.—Messrs. sons imported this very handsome species from Java. It is an al, requiring similar treatment to the Thunbergia alata, &c. The s are as large as those of a vigorous-grown common Convolvulus r, but do not spread so much at the mouth. They are of an in- violet colour, with a broad edging of pure white. It is a free- ng climber.

YLLOCACTUS CAULORRHIZUS. THE ROOTING-STEMMED CACTUS , P. crenatus).—It is a vigorous plant, formed of compressed g portions, and at each joint rootlets are produced. The flowers m and size are much like those of Cereus grandiflorus (the night- ing Cactus of some). The outer surface of it is yellow, and the white. They expand at the evening and close the following ng. In the Belgium collections.

IMULA CAPITATA. ROUND-HEADED MEALY PRIMROSE. — ooker gathered seeds on one of the Himalayan hills. It has ed at Kew, and proves to be of the same class as our P. furinosa, he blossoms are so closely and evenly set as to form a compact shaped head. They are of a deep purple colour, with a yellow Each blossom is about a quarter of an inch across. The flower- ises to a foot high. (Figured in *Bot. Mag.*, 4550.)

IPSALIS PACHYPTERA (Syn., Cactus alatus).—It is of the flat- l kind, hanging down, the edges deeply notched, and from each a flower is produced. Each blossom is about half an inch across, h, and are succeeded by a berry about the size and colour of a rrant, in which state it is very ornamental. It was introduced in 1839, from Rio Janeiro by Sir Charles Lemon, and bloomed at Carclew in 1846.

VIBURNAM PLICATUM, VAR. DILATATA. THE CRIMPED GUELDRES ROSE.—The Horticultural Society introduced this plant from China. It is a deciduous greenhouse shrub, and blooms very profusely, forming numerous heads of snowball flowers, like the common one of our shrubberies. In China it forms a bush eight or ten feet high. It is supposed to prove hardy in this country in the warmer parts. Dwarf plants in the greenhouse will be handsome objects, and well worth having a place in every one. (Figured in *Paxton's Flower Garden*, 29.)

SHOWY PLANTS IN BLOOM IN THE ROYAL GARDENS OF KEW, DECEMBER 16.

ACHIMENES PICTA.—Fine plants are now coming into profuse bloom; such will increase in beauty through winter. They are in the stove.

GESNERIA HERBERTII.—Large plants, in fine bloom, the flowers of a bright scarlet and rich yellow colours, beautifully spotted inside. The tube is wide, and the front limb fully expanded, which shows the flower fully. Very handsome. These will bloom the entire winter, and are very ornamental; so are the vigorous specimens of *G. zebrina.* Every plant-stove or warm greenhouse should contain some of these fine winter blooming plants. *G. triflora* is pretty, the flowers are of a rich scarlet, very hairy, tube an inch and a half long. The blossoms are produced in threes, at the joints. *G. Seemanni*, a plant of this beautiful species, had a spike in bloom four feet long, and had a profusion of its fine scarlet and orange-coloured blossoms.

BEGONIA FUCHSIOIDES.—Some large specimens were in fine bloom, and their rich red drooping flowers were beautifully interesting. It is a fine plant for this season of the year.

In the Greenhouse.

ERICA FLORIBUNDA.—The flowers are globular, small, white with a tinge of pink, and the anthers are black, giving the flowers an appearance of a black spot at the centre of a white blossom. Very interesting, and blooms most profusely.

ERICA BLANDA.—Tube one inch long, white, and pink tinge. Very pretty.

ERICA COLORANS.—White, neat, and blooms freely.

SELAGO GILLII.—The flowers are small, but borne profusely in very long spikes, of a neat rosy-lilac colour. It has a pretty effect in the greenhouse collection.

IBERIS SEMPERFLORENS.—This ever-blooming Candy tuft is a neat shrub, nearly a yard high, and a free-flowering plant. The fine heads f snow-white flowers form a nice contrast to the green foliage of thers.

Epacris albida compacta.—Flowers nearly an inch long, bell-haped, pure white. Very pretty.

Cobræa Stockwelliana.—Flowers an inch and a half long, bright ed, profuse bloomer. C. speciosa, C. speciosa grandiflora, C. alba, . rosea, and C. tricolor were commencing their floral display. Their eautiful tube-shaped flowers, with pretty contrasting colours, and orne copiously, render them most charming objects in the greenhouse roughout winter and spring. Every greenhouse should have some f the best in it.

Buddlea Madagascardiensis.—In the stove; a neat plant, proucing a profusion of bright orange-coloured flowers, borne in long ikes, which are highly ornamental. The foliage and branches are arly white: the contrast is strikingly pretty. It is well worth owing.

Plumbago rosea.—This is a charming winter-blooming stove ant; its fine spikes of bright rose-coloured flowers are very pretty. well merits a place in every one,

Coronilla glauca and **C. glauca-variegata** are profuse oomers: their numerous heads of bright yellow, pea-formed flowers e very pretty. Every greenhouse should contain them.

Luculia gratissima.—This is one of the most charming flowering ants of the season. Large or small ones will readily bloom, and eir fine heads of fragrant flowers, of a neat fresh pink colour, are ry pretty. It is well worth growing.

IST OF THIRTY-SIX EXTRA SUPERB RANUNCULUSES.

BY AN EXTENSIVE GROWER AND EXHIBITOR.

HE following descriptive list of superb Ranunculuses has been for-rded to us, by request, from a correspondent who is fully acquainted th this lovely tribe of flowers, and on whose judgment we can rely. e are certain it will be a useful guide to any of our readers who may sh to improve a collection, or now commencing the culture of this iversally admired flower. And, as this is the appropriate season for mpleting and arranging the stock preparatory to planting in February, e trust it will be of present service:—

Acmè (Waterstone's), white, red-spotted.
Badia (Tyso's), yellow, red-edged.
Beauty of Suffolk (Bass's), white, rose-edged.
Berinus, yellow, brown-spotted.
Boz (Tyso's), cream, crimson-edged.
Countess of Eglinton (Wylie's), white.
Clement (Tyso's), yellow, red-spotted.
Dr. Channing, white, purple-edged.
Director (Tyso's), yellow, red-edged.

The African Ranunculus differs from the Asiatic by having few but larger leaves, which are of a darker green than those of the latter kind. The stem seldom produces more than one flower, and never exceeds two; they are very double, and a stem is frequently thrown up from the centre of the flower, bearing a second corolla of a smaller size. This is the flower which the French name *Rénoncule Pivoine* and *R. Péone.* There are several varieties too of this kind of Ranunculus, amongst which is one of the colour of the Jonquil, which the French call *Séraphique d'Alger*, and another of the hue of the Golden Marigold, with a green heart, and which is named *Souci Doré*, or *Merveilleuse*, and a pure white one; also another, which is most esteemed, of a fine red colour, spotted with yellow, and which is called *Turban Doré*, Golden Turban.

PINETUMS.

As Coniferous plants, and their allies, either in selections or collections, are becoming indispensable addenda to the grounds of all lovers of the beautiful forms presented in the vegetable kingdom, it may not be an inappropriate season to discuss a few points in the arrangement of the Pinetum.

It is painful to witness, in many instances, large and valuable collections of Pines scattered about the nooks and corners of parks and pleasure-grounds, without regard to the future space which the individuals are likely to occupy, with utter disregard to appropriation of situation, and with no eye to the character ultimately to be given to the scenery of which they are to form a part. In some instances we see a fine specimen struggling in the precincts of the flower-garden, beneath the overshadowing branches of some giant Oak or other tree, which cannot, or, at least, it would be next to sacrilege to remove. The Pine, doubtlessly, had been planted there when a minute plant, with no prospective recognition of its capabilities, and now, like a "blot on the 'scutcheon," a constant source of regret to its owner; deformed in its habit, stunted in its energies, when it might have been a "thing of beauty," with all its attendant influences. Again, a portion of land is pointed out to you in which it is asserted that Pines are planted extensively, due space having been given to allow for the development of all their natural capabilities. In your progress to the spot several fine specimens may be seen peeping, like land-marks, above the tangled mass of brake and briars, gorse and rubbish, in which vainly you seek the smaller members of the fraternity. In another domain, portions of the park are fenced off and devoted to Pines. Here they are planted literally pell-mell, jostling each other even in their infancy. P. Hartwegii is smothering P. insapo, macrocarpa deforming Lambertiana, Deodars mingling their branches with Araucarias; in fact, the results of a liberal outlay becoming a deformity rather than a beautiful feature. A few rods from this you will probably see some "crates" protecting detached plants, which, if they have succeeded, are damaged from confined space or overtopped by nettles and rank herbage. It is but justice to observe that such conditions are entirely to the charge of the proprietors, and not to those who have them in care.

In almost every instance Pines are planted too thick; and this state of things is not, and, in many instances, will not be fully recognised till the individual plants have attained a magnitude that will render their trans-plantation hazardous, or totally impossible, if their future well-being is to be recognised, leaving out of the question the deformity which the remaining trees must suffer from being crowded. It is doubtless possible to group Pines with an ultimate good effect in particular scenery and localities; but a perfect knowledge of the adult characters of each species must be known to the planter before he commences operations. But it is doubtful if such an arrangement, where picturesque effect is sought, can be carried to any great extent beyond allowing each group to be formed of one species. Such a system may be departed from by employing only the true Pines; but the Abies and Pinus, possessing such an individuality of character, would be more suitably located in detached spots, several trees forming in the distance a group, of which each individual should form a part of a whole. With the true Pines, such as macrocarpa, ponderosa, &c., several in a mass would doubtless, in an adult state, form highly picturesque objects. Some idea of such may be formed by viewing a group of several old Scotch Firs mingling together; nothing in the way of trees can be more attractive. I have seen a collection, in which there are some points worthy of consideration. They are arranged on either side of a rambling pathway, accessible at all seasons by being gravelled; but the uniformity is too great in the disposition of the individual specimens, and a too great proximity will ultimately be observed and regretted.

It surely would be well for those who so liberally purchase valuable plants to have an eye when planting them to their future appearance. There is something worthy of observance in the old adage, which asserts that every man may do what he wills with his own; but I doubt if we can wholly recognise its truth where a future generation is to participate in the results. And in the development of the newly-introduced, or newly-planted species of Pines, although it would be uncharitable as well as unjust to infer that the planters will not derive a large share of enjoyment, yet we must confess that posterity will behold their greater beauty. Witness the magnificent Cedars of Lebanon, adding a nobleness, a dignity which cannot be described, to so many of England's mansions and demesnes. In conclusion, I would intreat those who possess collections of this noble family to set about arranging them during the following planting season, now at its advent; and to those about to form a Pinetum, I would say—consider, and form some suitable design before you commence.—(*Gardener's Chronicle.*)

WATER-LILIES.

BY AN ARDENT AMATEUR FLORIST.

YOUR review in the December number, of LAWSON ON WATER-LILIES, induced me to purchase that very interesting publication; and in its perusal on the White-flowered Water-Lily of our own country, brought to my recollection that I have seen two kinds of the White-flowering in bloom. The common one I have often seen and admired; but there is a much superior blooming kind growing in the grounds of one of the royal palaces. It is a much more noble plant, and the flowers are at least half as large again as those of the common kind. I was very much struck with its beauty; and it occurred to me, that if its flowers were impregnated by those of the Royal Victoria Lily (Victoria Reginæ), a vast improvement would very likely be effected in the size of the flowers of the progeny which might be raised by this hybridization: at all events, I intend to make the experiment the next season. I also purpose, on the other hand, to impregnate the flowers of the Royal Water-Lily by those of the common *Yellow*-flowered Water-Lily, with a hope that a yellow flower may be obtained the size of the present noble blossom of Victoria Reginæ.

I further intend to impregnate the common Yellow-flowered with the pollen of the V. Reginæ, hoping to obtain a larger flower of this hardy one.

These attempts I am persuaded will be, to me at least, very interesting, and I fully anticipate successful results. I beg, however, the co-operation of others, that by more extended attempts to obtain flowers of our long-possessed Water-Lilies, both in doors and out doors, of a much larger size may be obtained, as well as superb varieties be raised from the impregnated seed saved from the Victoria Reginæ. I am confident any attempts will be amply rewarded, and, I doubt not, would lead to a far more general cultivation of this highly-interesting tribe of plants. They are easy of cultivation, and where the means exist of water, &c., it is well worth every attention.

I read as follows in Mr. Lawson's book, "that a Water-Lily POND should always be furnished with a plentiful supply of clear water; and that, while a supply is constantly (or often) kept up, provision must be made that the superfluous water be regularly run off at short intervals to preserve the purity of the pond.

The kind of soil, too, is of great importance; the bottom of the pond must be formed of soft mud to a good depth, and it must be heavy enough not to be readily washed away, but by no means be of a *clayey* nature, although a clay lining may be made beneath to prevent the escape of water.

The Water-Lilies are perennials; the tuberous roots may be cased in mud, and be thrown into the water at the places the plants are to be deposited for growth, or they may be tied to a stone for the same purpose. When seeds are obtained, they may be wrapped in portions of mud and scattered at the proper places for growth. They readily grow in both instances.

It will be recollected by all who have seen the White-flowered Water-Lily in its native waters, that, however plentiful the plant may be, it never extends its foliage or its flowers within a certain distance of the dry land, ceasing to grow where the water lessens in depth. This should be borne in mind by those who attempt their growth, and the water should not be less than three feet in depth where the plant or seed is deposited; the piece of water, too, should be fully exposed to the sun throughout the day.

PLANTS SUITABLE FOR A WINTER GARDEN.

A CORRESPONDENT in the *Gardener's Chronicle* writes, "Everybody complains of the barren and uninteresting appearance of the flower-garden in winter and early spring, and that a collection of such attractive plants as put on their gayest dresses at that season must be to all lovers of gardens a thing to hope for, and to admire when obtained."

To effect this, such plants must be grown in pots and be plunged in the beds or borders when the summer and early autumn flowers are over. The plants and shrubs to be removed in time for the summer flowers, and to be re-potted, and otherwise attended to in a reserve garden during the summer season. The following list comprises plants which are considered most suitable for the purpose. The bulbous and other dwarf herbaceous plants, of course, are to be placed near the edges of the beds, &c.

Dwarf Evergreens (Shrubby Plants).

Variegated Ivies.
Polygala Chamæbuxus.
Erica carnea,
Pernettya mucronata.
Daphne hybrida.
——— japonica.
Gaultheria Shallon.
Epigæa repens.
Juniperus tamariscifolia.
——— squamata.
Arbutus pilosa.
——— Siberica.

Taller Evergreen Shrubby Plants,

Which may be grown to suit various heights.

Andromeda floribunda.
Berberis fasciculata.
——— aquifolium.
Aucuba japonica.
Laurus nobilis.
Juniperus virginiana.
Thuja Warreana.
——— aurea.
Vaccinium ovatum.
Taxus baccata variegata.
Buxus vulgaris.
Gaultheria Shallon.
Cotoneaster microphylla.
Jasminum nudiflorum, for its early flowers.
Arbutus unedo.
Ilex (variegated).
—— latifolia, &c.
Quercus ilex.
Ruscus aculeatus.
——— ramosissimus.
Rosmarinus officinalis fol. argenteis.
Ditto ditto aureus.
Rhododendron dauricum atrovirens.
Euonymus japonica.
——— ——— variegata.
Daphne collina.
Cydonia japonica.

Herbaceous Plants, &c.

Alyssum saxatile variegatum.
Helleborus viridus.
———— nigricans.
Galanthus nivalis.
Scilla verna.
Saxifraga oppositifolia.
Gentiana acaulis.
————verna.
Hepaticas.
Polyanthus.
Primulas (Primroses).
Auriculas.

Tussilago Farfara.
Aconitum hyemale.
Anemone hortensis.
———— in varieties.
———— nemorosa.
Crocus sativus.
Hyacinths.
Narcissi.
Jonquils.
Daisies.
Cardamine pratensis flore pleno.
Cyclamen europæum.

The following may be added, blooming during winter and early spring; and such as are deciduous may be kept in the reserve garden till the flowers appear, and then be plunged in proper places to bloom.

Shrubby Plants.

Alex europeæ, double.
Calycanthus præcox.
Early blossomed Almond.
Pyrus japonica.
Rhodora canadensis.
Daphe collina.
—— laureola.
—— cneorum.
Andromeda calyculata.

Daphne mezereum.
Lonicera nigra.
Many Hollies produce a profusion of berries when grown in pots. The red, golden, &c., are highly ornamental.
The Lauristinus.
Azalea procumbens.
Andromeda polifolia.

Herbaceous Plants.

Cynoglossum omphalodes.
Erinus alpinus.
Adonis vernalis.
Arabis alpina.
Pulmonaria officinalis.
———— virginica.
Early Tulips.
Scilla bifolia.
Potentilla verna.
———— opaca.
Saxifraga oppositifolia.
———— hypnoides.
Cortusa Matthioli.

Fumaria solida.
——— cava.
Anemone nemorosa, double.
Draba aizoides.
Dog's-tooth Violet.
Frittillarias.
Leucojum vernum.
Ixia bulbocodium.
Tursilago fragrans.
Adonis vernalis.
Violets, of sorts.
Dentaria bulbifera.
Soldanella alpina.

CULTURE OF THE HOLLYHOCK.

BY MR. WILLIAM CHATER.

The Hollyhock will grow best in good old garden soil, well trenched over to the depth of two feet, with plenty of thoroughly decomposed manure; such as old Cucumber beds, or night-soil mixed with earth. Sandy loam they like, and if the subsoil is wet they will thrive remarkably well in the summer, but in the winter wet is very injurious to them; to prevent which, I remove, to the depth of one or two inches, the mould round the neck of the plant, and fill up with white sand, about six inches round the stem, level with the surface: it is simply to preserve them from wet, insects, and slugs, from which, in the winter, they are apt to suffer very much, if not killed. They may be propagated by single eyes in July and August, also by cuttings in the spring, placed on a slight bottom heat. Young plants raised from summer cuttings are best preserved by re-potting them in October into large pots—the larger the better—in light rich sandy earth, and placed in a cold frame; thus they will grow during the winter. In March or April turn them out into the open ground, and they will bloom as fine and as early as if planted in the autumn. Plant them not less than four feet from row to row, and three feet apart in the row. If grouped in beds, not nearer than three feet each way, They will grow well in the shade of distant trees, but by no means must the roots interfere. In May, when the spikes are grown about a foot high, thin them out according to the strength of the plant; if well established and very strong, leave four spikes; if weak, two or three, or only one, at the same time placing a stake to each one separately. The most robust grower does not require a stake higher than three feet from the ground. Stake them before they get too high, and secure them well by tying, and they will grow erect. If the weather is dry at this season of the year they must be watered with a solution of guano, or any other liquid manure, poured carefully round the roots, avoiding pouring it on or too near the stems. To grow the flowers fine, cut off the lateral shoots, thin the flower buds, if crowded together, and take out the top of the spike, according to the height desired, paying attention to the usual height and habit of the plant. Observe, by topping it you may increase the size of the flower, but at the same time shorten its duration of flowering, and perhaps disfigure its appearance.

BRIEF REMARKS.

WINTER DECORATION OF THE FLOWER GARDEN.—Lest the occurrence of a number of empty beds on a lawn or in a flower garden, where the system of massing summer plants is adopted, should impart to a place a bare and desolate aspect during winter, a store of the lower kinds of Evergreens should be kept in pots, and plunged in some part of the kitchen garden, or in any reserved corner through the summer, to be transferred to the flower-beds directly their gayer furniture has been cleared away in autumn. Such a plan is less troublesome than it appears to be; for if the plants be kept constantly in pots, summer and winter, and merely be plunged in the ground, a simple re-potting once a-year, with an occasional watering in only the very driest summer weather, will be all the attention they want for three or four years, when they will require renewing by propagation. The fittest kinds for the office will be several dwarf Heaths, particularly the Erica carnea, Cotoneaster microphylla, Berberis aquifolium, Menziesia polifolia, Andromeda floribunda, Pernettya mucronata, Arctostaphylos uva-ursi, Gaultheria Shallon, Ledum buxifolium, Rhododendrons ferrugineum and hirsutum, the common trailing Savin, and the varieties of the Minor Periwinkle. By a judicious choice and variation of these, putting one sort only to a bed, some amount of verdure and liveliness will be produced during winter, at a cost of labour and materials which are entirely insignificant in comparison with the effect realised. The intermixture of a few beds of variegated Ivy, or variegated Periwinkle or Savin, or even the variegated Hollies (especially the prickly), variegated Yew, and Aucuba, kept dwarf, would increase the variety. The plants should be potted in rather a poor soil, lest they grow too luxuriant, and send their roots too far beyond the pots.—*Kemp, on Small Gardens.*

Hybridizing the Gladioli.—Mr. Beaton states that the flowers of Gladiolus cardinalis being of the *best* scarlet and white, that the style of growth and colouring of this handsome species be infused into the descendants of G. psittacinus and oppositiflorus. Crossing the finest of the new Seedlings we possess with the pollen from G. cardinalis, and that the richest coloured ones, raised from such crosses, be impregnated again with pollen from G. cardinalis, and repeated upon even such a progeny till the *yellow* brought in by G. psittacinus be washed into a *brighter* yellow. The endeavour should be to obtain the most decided colours, and the more so of the brilliant; and at the same time to secure the *best form* and substance of petal. Each progeny will amply repay for the attention given. We shall be glad to have the suggestions of Mr. Plant as applicable to this very favourite tribe of (his) flowers.

Descriptive character of the classes of Roses.—In the very useful observations on the Rose which have been given in this Magazine, mention is made of them under the descriptions of Gallia, Bourbon, Noisette, Boursault, Perpetual, &c. Now, I am not acquainted with the particular distinctive characters, I should, therefore, be obliged by information on the subject as early as possible, as my employer requires a number purchasing, suited to peculiar existing circumstances, and I have to make out the selected list previously.—*A Gardener.*

[All classes of Roses have indiscriminately been impregnated, and seeds so generally sown, consequently it is a most difficult task to properly classify the entire. A short time back we visited the most celebrated nursery collections, in order to obtain the distinguishing peculiarities of the classes into which Roses had been divided. We were not able to realize all we desired, but the following general peculiarities we obtained, and, we hope, they will be of use to our correspondent. We intend to obtain more particular information on the subject next season, which we will insert.—Conductor.

Damask Roses.—This section, and the Albas, contain some of the finest light Roses, or blush Roses, grown. The true Damasks may be *generally* known by their long green shoots, leaves rather downy, and placed far apart, *rough spiny shoots and leaves;* the capsules, or seed-vessels, are mostly *very rough* or spiny, and the flowers are very sweet.—A summer Rose.

Moss Roses.—An elegant family, a division of the section Centifolia, or hundred-leaved, being only a sport from it, the *moss* being the criterion.—A summer Rose.

Provence, or *Cabbage Roses.*—The term one hundred-leaved, of the French, does not refer to the foliage, but to the *petals* of the flowers. The flowers are all *globular* in form, and on *long* footstalks, so that they hang gracefully pendant, and are readily distinguished from all others. They are very fragrant.—A summer Rose.

Portland, or *Perpetuals*, and *Hybrid Perpetuals.*—This class is the most desirable of Roses, and all *true perpetuals have a terminal cluster of flowers.* They continue in bloom longer than any other section. They are mostly *Damasks*, or hybrids from the Damask. The fragrance of this Rose in their blossoms is apparent. The blooming in autumn, that is to say, from the beginning of August to the end of the season, renders this class very distinctive, as well as the *clusters* of flowers.—Autumnal Roses.

The *Hybrid Bourbons*, or *Hybrid Perpetuals*, partake of the hardiness and fragrance of the Damask Rose, blooming freely in autumn, and resemble in growth and foliage the Chinese.

White Rose, or *Belgic*, and their *Hybrids.*—This section is easily known by their *clear green shoots*, and the leaves being of a *glaucous green*, looking as if dusted over with a greyish powder. The plant has few spines.—A summer Rose.

Rosa Gallica, the *French Rose.*—This section contains most of our old garden Roses; they are robust and hardy, stiff, *erect* and *compact* growers. The flowers are mostly *very full*, finely formed, and contain many beautiful striped and spotted ones.—A summer Rose.

Bourbon Rose.—Of this section it is stated, that "at the *Isle of Bourbon*, the inhabitants generally inclose their land with hedges made of two rows of Roses, one row of the common China Rose, the other of the Four Seasons, the only two sorts grown in the island. Monsieur Perichon, as proprietor at Saint Benoist, in the isle, in planting one of these hedges, found amongst his young plants one very different from the others in its foliage and shoots; he planted it in his garden, and it proved to be quite a new Rose. This, with all the fine hybrids, form, amongst the *Indica Roses*, what the Perpetuals do amongst the *Damask.* They are free and continual bloomers, *prominent buds, and deep green foliage, free growers.* Some are fine as climbers.—Autumn Roses.

China Rose.—The original from China, and all true varieties have strong green luxuriant shoots. Its *ever-blooming* qualities have made it a favourite, and perhaps no plant has contributed so much to enliven our cottage walls as the common China Rose, and the Rosa semperflorens, or Crimson China Rose. They bloom for a long season, *some* being fragrant.

Noisette Rose. — The Noisette has been originated *between the musk and the common China, or Indica.* The perfume of the musk is very apparent, its tendency to bloom in *large clusters like the Musk*

Rose also shows its affinity, and they are produced in profusion through the summer and *autumn*. Some of them are well adapted for pillars, or training to fences and walls, as well as standards, in which mode they form fine heads of pendant branches.

Hybrid China Roses.—This section has been originated ***between the China tea-scented Noisette and Bourbons, fertilized with the French, Provence, and other*** SUMMER ROSES, AND ALSO TO THE LATTER BEING CROSSED WITH THE FORMER, the seeds from which produce HYBRID CHINA ROSES. The character of the section is ***smooth shining foliage. being sub-evergreen, branches long, luxuriant, and flexible.*** They give a long series of flowers, but ***not a secondary one, and bloom early only.*** They do well as standards, forming fine heads.

Climbing Roses. The *Ayrshire.*—It is considered that this tribe had its origin from the ***Rosa arvensis,*** the common Rose of the north of England and Scotch hedges, and has acquired much additional vigour from an accidental impregnation. Shoots of the single and semi-double white on some occasions grow in one season from twenty to thirty feet long.

Rosa sempervirens. The *Evergreen Rose* (Climbing). — The origin of this class is the *Climbing Wild Rose of Italy,* which has *single white* flowers, and foliage *nearly* EVERGREEN. The flowers are mostly *small,* not exceeding what is termed middle size; they are produced in *large clusters or corymbs,* of from ten to fifty blossoms in each. They are valuable for covering fences, walls, stems of trees, festoons, or as pillars.

The *Boursault Rose.*—This class owes its origin to the ***Rosa alpina, the single Red Rose of the Alpine mountains.*** The shoots are ***long.*** having *few spines,* and of a ***red colour.*** They grow rapid, are very hardy, and do well as climbers or pillar Roses. The flowers are produced in *immense clusters.*—A summer Rose.

Rosa Multiflora. ***Many-flowered Rose.*** — A native of Japan; and from the original one introduced into this country, ***crossed by other kinds,*** some beautiful hybrids have been obtained. In warm situations, some of the class will form pillars thirty feet in height. They belong to the ***summer blooming*** section.

The ***Austrian Briar Rose.***—The original Rose of this class was found growing on the hills of the north of Italy. The shoots, when ripe, ***are of a yellowish-brown, prickly.***

Rosa sulphurea. The ***Double Yellow Rose.*** — This old and fine Rose, no doubt, has been raised from the single Yellow Austrian Briar, very probably impregnated with a Damask Rose. Having the foliage-form of the first, and the flower-form of some of the latter.—A summer Rose.

The ***Tea-scented Chinese Rose.*** — The original plant was sent from China. The ***seed vessel is large, leaves large,*** and ***shining flowers, globular,*** and have the so-called TEA FRAGRANCE.

CAPE HEATHS.—To grow this very interesting and beautiful tribe of plants, the following particulars are essentially necessary.

Soil. A fibrous, sandy peat (heath), free from irony matter (if there its presence is readily perceived). Never have it sifted, but well chopped and broken together, in which state it must always be used. A sprinkling of bits of charcoal are of service.

Potting. Have a liberal drainage of broken pot, upon which place bits of turfy peat. Be careful not to over-pot at a time; that is, do not have too large a pot, the roots being so very fine, in their early growth, do not require more than an inch extension at one time all round its ball. When that portion is tolerably well filled with fine roots, then re-pot in a larger one, as above stated. Never allow a plant to be what is termed *pot-bound*, as in that state they are liable to lack a proper supply of water, the foliage turns brown, unhealthy, and soon perishes. Sometimes, too, the roots are injured by drought at the sides of the pots, and perish at the ends. When this has happened, turn out the ball entire, carefully remove the outer portion of the soil, where the roots are killed, and re-pot with fresh soil. This should be done at any season when the plant requires. More particularly should the stock be looked over *previous* to their *pushing* in Spring. Let the surface of the ball be nearly *level*.

Water. Always use soft water, and about the same temperature as the air the plants are in. Each time you water give as much as will soak the entire ball of soil, and only water again when it has become nearly dry. Never allow the plant to flag. Some persons give at once as much water as will only moisten, perhaps, one-third deep of the ball, and the under portion are kept completely dry, and so die of drought. If a ball is so close with roots that the water will not sink, make a few holes into it by means of a bright small iron skewer, and this will assist its general diffusion.

Air. These plants, to flourish properly, must have a house to themselves, however small or large it is. A house must be constructed so that all the light be given to it that can be; and the plants not be far from the glass, from three feet at the sides to five at centre, of a double-roofed house. Air must be admitted at each side of the house, so that the upright sashes being opened, a *current* of wind affects to moving the shoots, that is, gives the plants a *living moving* atmosphere, on all proper occasions; avoiding, however, *cold* eastern or northern blasts. In a house properly constructed, by having the plants placed upon an even table, up the centre portion of the house, so that a walk is allowed around it, and a shelf on the same level be next the sashes, thus in passing around there are plants right and left. I say, in such a house, the plants may remain all the year; they require no out-door situation in summer. If it be desirable, in the very hottest of summer, to have the roots somewhat cooler, place a boarded frame round the table, and fill up between the pots with neat moss. The pots should be placed upon a pot-rim about an inch high; this is better than upon either a slate or stone table; they are cooler than the atmosphere, and injurious in proportion to the success of the plants. The rim supports the pot, and if three or four inches in diameter, the water out of the pot bottom passes away.

FLORAL OPERATIONS FOR THE MONTH

THE practical utility of our monthly Calendar has been alluded to during the past year by many of our correspondents. Our readers are aware we cannot enter fully into all the details of management of everything which demands attention during the month in the various departments of floriculture. Want of space compel us to condense all subjects, and only to introduce those particular tribes of flowers, &c., that are the most essential. We shall, however, give what is really necessary, and make those remarks more as remembrances of what is to be attended to than details of management, the latter being recorded in other parts of the Magazine.

The winter has hitherto been unusually mild; but as *sudden* frosts often occur, it is well to have materials for immediate use, wherewith to protect *tender plants* out of doors.

IN THE FLOWER GARDEN.

Protect the heads of tender Roses, or other tender shrubs, trees, &c., by tying a number of Yew, Spruce, Fern, or similar materials, amongst and around the branches; but whilst protection is given, do not have them so close as to prevent a due circulation of air to the shoots, &c. **Roses** and Hollyhocks should be planted as *soon as possible*. Newly-planted shrubs should be secured, so that they may not be moved at the roots by wind. Mulch over the roots of tender ones. Give fresh loam to flower-beds, and manure, leaf-mould, &c., if necessary. Frost paves the way to do it without damage to walks or lawn.

Florist's Flowers.—Auriculas and Polyanthuses should only be kept *just moist* (not wet), and be *just preserved* from frost. If the embryo flower be affected by frost, it is always injurious; give air, however, on every likely occasion. Most Auricula and Polyanthus growers sow seed early this month (see Articles in former volumes as to method). Carnations, Picotees, and Pinks in pots require to have air freely, but water very sparingly. Protect them from continued excess of rain. Prepare compost for the former *now*.

Pinks and *Pansies* in beds having had a thin layer of light sod around the beds, require little more attention now than seeing that the lateral branches are secured by pegs, so as to secure them from injury by wind; and if it comes on very severe, place a flower-pot over each, taking care to remove them on the first favourable change. Fir or Yew branches, a foot or so high, pricked round the bed, is an excellent protection from wind; and a few stuck in among the plants is useful in severe weather. A sprinkling of soot over the bed tends to preserve the Pinks from rabbits and snails. Pansies in pots should be uncovered in mild weather, so that they may receive the benefit of free air and gentle showers. *Ranunculuses* and *Anemones* planted last autumn may be protected from injury by frost, with garden-mats over the bed. The bed for planting in *next month* should now be turned over for the last time; pick out all worms, and give it a slight sprinkling of lime; then spread the bed evenly, and it will be consolidated by the planting period. *Choice Hyacinths* may be protected by similar means, or by placing an inverted garden-pot over each. *Dahlia* roots stored safely from frost are not necessarily secure from decay, but require examination to remove all that seem damping or shrivelling, potting them in rather dry soil, and placing them in a warm frame. The best sorts, of which a large stock is desired, will, about the latter part of the month, require potting and placing in the frame, gradually inducing them into activity. *Tulips* still require to be most carefully guarded from frost, for however hardy the nature of the bulb is, they rarely throw up perfect blooms if touched by frost. Divide and replant herbaceous perennials, &c. If autumn sowing of annuals was omitted, now sow some in small pots, place them in a frame, and turn them out in the beds early in April: such will bloom early.

IN THE FORCING STOVE.

At the end of the month sow seeds of the tender annuals, as Cockscomb, Amaranthus, &c., to have them fine specimens for the greenhouse in summer; and Ten-week, Russian, and Prussian Stocks, &c., to bloom early, should be sown in pots, or be sown upon a slight hotbed; also some other of the *half-tender* kinds, to prepare them strong for early summer blooming.

The Jacobeæ and Guernsey Amaryllises, with others of the genus, should be repotted; also to have a few early blooming plants of Achimenes, Gloxinias, Gesnerias, &c., they should be started, and when beginning to push separate and pot them singly.

Cuttings of Salvias, Fuchsias, Heliotropes, Geraniums, Anagallis, Hemimeris, Lotus, Bouvardia, &c., desired for planting out in borders or beds during spring and summer, should now be struck in moist heat, in order to get the plants tolerably strong by May. Lobelias in pots should now be pushed, in order to divide and pot singly next month. Mignionette, to bloom early in boxes or pots, or to turn out in the open borders, should now be sown. Sow in pans seeds of Rhododendrons, Azaleas, Ericas, &c.; the plants will be fit to plant off in May.

IN THE GREENHOUSE, &c.

If Camellias are not regularly supplied with soft, not too cold water, the buds will drop; if too much, frequently that will cause them to drop too. Thin the flower-buds if crowded. Never give heat to Heaths as long as the frost can be kept out by coverings or otherwise. A few degrees of frost will never injure Cape Heaths, whereas fires are their ruin. Let the air *blow* upon them on all favourable occasions, as nothing destroys the constitution of these plants so much as close and damp houses: so with the entire class of New Holland plants. Should any choice varieties of Azalea indica be required for the purpose of propagation by cuttings, they may be transferred to a temperature sufficiently high to excite an early growth. Cuttings of these will be found to root with much greater facility early in the season than at a later period; besides, it is of considerable advantage to have young plants strong and well established by the approach of the succeeding winter. Gladioli, Alstrœmeria, Lilium, &c., grown in pots at the end of the month, should be re-potted. When the weather is damp or foggy do not give air, only let a dry air be admitted. Tender and small kinds of plants should frequently be examined to have the surface soil *loosened.* Calceolarias—re-pot seedlings, strike cuttings, &c.

Chrysanthemums having now quite ceased blooming, the plants must be placed in a cool pit where they can be protected from severe frost, and have the tops cut off. Fuchsias which have been at rest and increase is wanted; now force them into shoots to strike from.

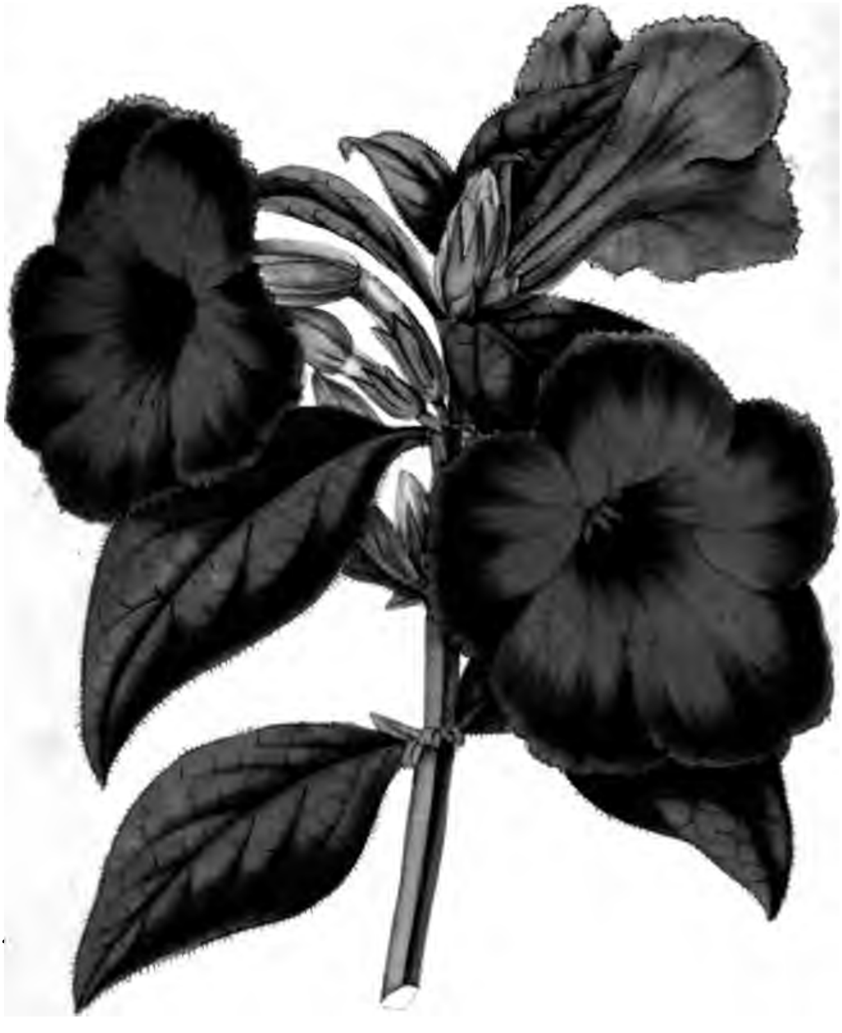
IN THE STOVE.

All kinds of plants required here for ornament, and which have been duly prepared by previous culture, should be introduced in succession, giving ample supplies of water and frequent syringing over head. The plants best adapted for forcing are various kinds of Roses, Persian Lilacs, Azaleas, Acacia armata, Neriums, Gardenias, Rhodora, Heliotropes, Correas, Deutzeas, Mezereums, Coronillas, Cytissus, Ribes, Mignionette, Cinerarias, Sweet Violets, Lily of the Valley, Tulips, Cyclamens; and the old Eranthemum pulchellum with its fine blue flowers, Justicia speciosa, Gesneriæ Zebrina, &c., Justicia pulcherrima, and Aphellandria cristata, are fine winter ornamental blooming plants. All pots or boxes containing bulbous-rooted flowering plants, as Hyacinths, Narcissus, Persian Irises, Crocuses, &c., should occasionally be introduced, so as to have a succession of bloom. Cactus plants that have been kept in the greenhouse should occasionally be brought into the stove for flowering.

ON PINKS.

BY A. Z.

In a compost of the following materials, I have grown the Pink very far superior to any I ever saw in any florist's garden, or at any floral exhibition, and both situations I have visited scores of times during the period of the last seven years. Turf, about three inches thick, from a pasture of loamy soil, procured, and laid up in a heap one year before required for the bed. One year old rotten hot bed manure. Decayed leaves, vegetables, sticks, and the ashes of burnt faggots, any of these, mixed together, or simply, and a portion of pebbly river sand. The three former materials in equal parts, and one-tenth of sand. Over the bottom of the space for the bed I laid four inches thickness of old rotted cow-dung, and upon it the above named compost nine inches deep.



Dipteracanthus spectabilis.

FLORICULTURAL CABINET

FEBRUARY, 1851.

ILLUSTRATIONS.

DIPTERACANTHUS SPECTABILIS.—THE HANDSOME FLOWERED.

THIS very showy flowering plant has been introduced by Messrs. Veitch; their collector discovered it on the Andes mountains of Peru. It has bloomed in their establishment at Exeter.

It is what is termed a soft-wooded plant (similar to the Ruellias), grows two feet, or more, high, much branched, and blooms very profusely. We find it flourishes in a warm greenhouse, growing very freely, and blooming all the summer; and, by having a few of them, repotting at various seasons, it can be had in bloom nearly all the year, and will be found a very ornamental plant. To bloom it well in winter, it requires to have an intermediate stove temperature. It is readily increased by cuttings, and merits a place in every establishment of exotic plants.

NOTES ON NEW OR RARE PLANTS.

Aster Sikkimenses. Sikkim Michaelmas Daisy.—Dr. Hooker collected seeds on the Alpine mountains of Sikkim. It is a half-shrubby plant, erect, growing three or four feet high. It is a free bloomer, and the flowers are produced in large corymbose heads, of a pretty purple colour. It has bloomed in the open ground the last autumn, in the Royal Gardens of Kew. In this situation the plant appears to assume the character of a hardy perennial; but if grown in the greenhouse, or under similar protection, it retains its half-shrubby habit. It is a pretty addition to a valuable tribe of autumnal flowers. (Figured in *Bot. Mag.*, 4557.)

Calceolaria cuneiformis.—It is a pretty greenhouse summer species, producing its pale lemon-coloured flowers throughout autumn and winter, on which account it is valuable. Introduced from South America by the Horticultural Society.

CAMPANULA COLORATA. DEEP COLOURED.—Dr. Hooker also collected seeds of this neat flowering species in Sikkim-Himalaya, at an elevation of ten thousand feet above the level of the sea. It is a spreading *perennial* plant, the stems from one to two feet long; it is *much branched.* The flowers are terminal, borne singly, both on the end shoots and the side ones. Each flower is of a regular bell-shape, about three parts of an inch long, and as much across the five parted mouth, of a bright deep purple colour. It is a very neat species, and bloomed in the Royal Gardens of Kew the last summer and autumn. (Figured in *Bot. Mag.*, 4555.)

CONSOLIDA ACONITII (Syn. Delphinium Aconitii).—A weak erect annual, half a yard high; flowers about an inch across, single, of a deep blue-lavender colour. Interesting and pretty.

DAPHNE HOUTTEANA. THE PURPLE-LEAVED MEZEREUM.—An old plant in this country, but very rare. The leaves are of a deep purple colour, and the flowers of a violet-lilac colour. The flowers of the common Mezereum appear before the foliage, but this has its leaves and flowers at the same time. It is quite hardy, and merits a place in every shrubbery. It is figured in *Van Houtte's Flora.*

DIDYMOCARPUS CRINITA. THE HAIRY.—Messrs. Veitch's collector discovered it at Singapore; it has bloomed in their establishment at Exeter, in the stove. The plant is half-shrubby, erect, about nine inches high, large leaves, of a rich coppery-green, with a velvet hue, above; but beneath, of a rich purple-red. It is a lovely dwarf plant, its beauty rather depending on the rich coloured leaves than on the flowers. Each flower is narrowish, funnel-shaped, bellying below the broad spreading five-lobed limb (mouth). The tube is an inch and a half long, and about half that across the limb (similar to some of the Pentstemons). The limb is white, tube yellow. (Figured in *Bot. Mag.*, 4554.

ECHINOCACTUS VISNAGA. THE TOOTH-PICK, OR MONSTER CACTUS. —This magnificent plant has bloomed in the fine collection of the Royal Gardens of Kew. The flowers appear in numbers from among the woolly mass at the top of the plant. When fully open they are nearly four inches across, yellow. Many of our readers have seen these extraordinary large Cactuses in the Royal Gardens of Kew; and some, the very remarkable one which in 1846 was nine feet high, and nine feet and a-half in girth, and weight a ton. At that time it was in vigorous health, but soon exhibited symptoms of internal injury, and the inside became a putrid mass, and the entire perished. Other lesser plants were already and are still in the collection, and one has bloomed,i ts weight being 713 lbs.; height four feet six inches, and girth eight feet seven inches. It has forty-four ribs. These plants were procured from Mexico, and presented to the Royal Gardens by Frederick Staines, Esq. (Figured in *Bot. Mag.*, 4559).

Gynerium argenteum; (or, **Arundo dioica**, or **A. Selloana**). The Pampas Grass of South America, where it inhabits the vast plains, and is said to grow ten yards high, and bear panicles of silky, silvery-white flowers two feet or more long. It is a tall perennial plant in our own country, and its fine plumes of flowers, borne by such a noble plant, renders it highly interesting and ornamental. It was introduced from South America by Mr. Moore, curator of the Botanic Garden, Dublin. The plant appears to be hardy in this country, flourishing in the garden of Robert Hutton, Esq., of Putney Park, near London. It is also in the Chiswick garden.

Hydromestus maculatus.—A stove plant, from Mexico. It is an under-shrub, of the Acanthacæa order; it blooms freely; even plants a foot high have flowered in the stove at the Royal Gardens of Kew. The flowers are produced in large terminal spikes, yellow, narrow tube, an inch long, and the limb spreading an inch across. The heads of flowers are in form and size like those of Justicia flavescens. (Figured in *Bot. Mag.*, 4556.)

Jonesia Asoca.—Found growing in gardens about Calcutta, where it forms a very handsome middle-sized branching tree. It is consecrated by the Brahmins; they plant it near their temples. The leaves are six inches long, lance-shaped. The flowers are produced in terminal corymbs, diversified with tints of orange, scarlet, and yellow. The head of flowers is about three inches across, and each blossom tube near an inch long, with a four-lobed limb three quarters of an inch across. (Figured in *Paxton's Flower Garden*, 32.)

Lonicera tartarica, var. **Punicea.**—Many of our readers know the Tartarian Honeysuckle; this is like it in appearance, except the flowers being larger and of a deep rose-colour. It was introduced into this country by the Horticultural Society, and is a native of Siberia.

Myrtus orbiculata.—Obtained from the Mauritius; sent to the Royal Gardens of Kew in 1824. It is a bushy shrub, six feet high, and blooms profusely in autumn in the stove; its Myrtle-like flowers, of a yellowish-white, are very pretty, and shed a delightful fragrance. (Figured in *Bot. Mag.*, 4558.)

Oncidium variegatum.—A pretty Orchid from Havannah, introduced by Sir Charles Lemon, Bart. The branching panicle of flowers is eighteen inches high; they are pink, richly stained with cinnamon-red. Each blossom an inch across. (Figured in *Paxton's Flower Garden*, 33.)

Pæonia Moutan, atrosanguinea.—This is the finest of the number which were introduced from China by the Horticultural Society. It is of vigorous growth; leaves tinged with red; flowers very large (six inches across), and very double, with deep blood-coloured petals, which are nearly as broad in the centre of the flower as at the edge. (Figured in *Paxton's Flower Garden*, 31.)

Portlandia platantha.—A very beautiful flowering stove-shrub, growing about half a yard high. The flowers are white, broad, funnel-bell-shaped, tube an inch long, and the five large-lobed limb is nearly four inches across. Messrs. Lucombe, Pince, and Co., of Exeter, possess this charming species, which deserves a place in every stove.

Verbena trifida.—A dwarf perennial herbaceous plant, a native of the temperate parts of America. It grows a foot high; the flowers white, and diffuses a delicious fragrance. It possesses little beauty, but its sweet perfume is delightful. It will enable us to obtain an hybrid race with beautiful flowers possessing these fragrant qualities. It is in the collection at Sion House gardens.

THE VERBENA OFFICINALIS, OR VERVAIN.

Every reader of this Magazine not only knows, but admires the lovely Verbenas which add so much to the beauty and ornament of our flower gardens of the present day. It is not, however, generally known that the Verbena was held in high estimation and venerated by the ancients of our own and other countries. The very name of the *Vervain* carries our thoughts back to the darkest ages of superstition, and to the religious customs of the ancient Heathens; and although they were in almost all particulars ridiculously absurd, yet their antiquity and intimate connexion with our own forefathers, invests it with a claim upon our particular attention. Whilst it was held in *reverential regard* by them, and we so much admire the beauties of the improved race we possess, we are taught the lesson, that it becomes us to feel grateful that we live in a brighter day, illumined by the mild rays of *a vital Christianity.*

The derivation of the name Verbena is somewhat uncertain; it originally signified any herb used to decorate altars for religious purposes; and this being so universally employed, received the appellation of The Verbena.

The Vervain sustained a considerable part in the impositions which were practised upon the credulous in ancient times, and hence it is so frequently mentioned in profane history. The Magi (termed Wise Men) of the ancient Elamites or Persians, made great use of this plant in their worship or adoration of the sun, always carrying branches of it in their hands when they approached the altar. The magicians also employed the Vervain in their pretended divinations, and affirmed that, by smearing the body over with the juice of this plant, the person would obtain whatever he set his heart upon, and be enabled to reconcile the most inveterate enemies, make friends with whom he pleased, gain the affections and cure the diseases of whom he listed. When they cut this plant it was always done when neither the sun or moon was visible, and they poured honey and honeycomb on the earth as an atonement for robbing it of so precious an herb.

The Greeks called it The Sacred Herb, Juno's tears, and Dovewort; and it was with this plant only that they cleansed the festival table of Jupiter before any great solemnity took place, and hence, according to Pliny, the name of Verbena is derived. It was also one of the plants which was dedicated to the Goddess of Beauty. Venus the victorious wore a crown of Myrtle interwoven with Verbena.

The Romans continued the use of this plant in their sacred rites, sweeping their temples and cleansing their altars with it, and sprinkling holy water with the branches. They also hallowed or purified their houses with it to keep off evil spirits. Their ambassadors or heralds at arms, wore crowns of it when they went to denounce war or give defiance to their enemies; and which is thus noticed by Drayton:—

> " A wreath of Verbene heralds wear,
>   Amongst our garlands named,
> Being sent that dreadful news to bear,
>   Offensive war proclaimed."

Virgil mentions it as one of the charms then in use:—

> " Bring running water, bind those altars round
> With fillets, and with Vervain strew the ground."

The Druids, both in Gaul and in Britain, regarded the Vervain with the same veneration which they bestowed on the Misletoe, and like the Magi of the East, they offered sacrifices to the earth before they cut this plant in the spring, which was a ceremony of great pomp. Pliny tells us that the Druids made use of it in casting lots, and in drawing omens, and in other pretended magical arts:—

> " Dark superstition's whisper dread
> Debarr'd the spot to vulgar tread;
> ' For there,' she said ' did fays resort,
> And satyrs hold their sylvan court,
> By moonlight tread their mystic maze,
> And blast the rash beholder's gaze.' "
>
> *Walter Scott.*

The Druids held their power through the superstition of the people, and as they were great pretenders to magic and divination, they excited the admiration, and took advantage of the ignorance and credulity of mankind; for by these arts they pretended to work miracles and to exhibit astonishing appearances in nature, as well as to penetrate into the counsels of heaven.

Divested of these pretended powers, there is no doubt but that the Druids were better acquainted with the medicinal properties of herbs than any other class of men in their day, since, their residences being in the recesses of mountains, groves, and woods, where vegetable productions were constantly courting their attention, it is natural to suppose that they would in some measure become acquainted with the qualities of plants in general. That the Druids of Gaul and Britain applied themselves to this study, and made great use of herbs for medical purposes, we have sufficient evidence, since we learn from scattered hints in Pliny's Natural History, that they sometimes extracted the juice of herbs and plants, by bruising and steeping them in cold water, and sometimes by infusion in wine; that they made potions and decoctions by boiling them in water; and we learn also that they frequently dried certain herbs before infusing them, and that they administered some plants by fumigations, and practised the art of making salves and ointments of vegetables, for which they had great renown even at Rome, to which city they exported the Vervain, and it was hence called Britannica.

Although so many ages have passed away since the Druids and their pretended spells have been abolished, yet we frequently meet with lingering sparks of their imagined light among the vulgar, who upon every occasion cling to superstition.

Madame de Latour tells us that the shepherds in the northern provinces of France, still continue to gather the Vervain under different faces of the moon, using certain mysterious ejaculations known only to themselves, whilst in the act of collecting this herb, by whose assistance they attempt to cure not only their fellow-servants, but their masters also, of various complaints, and they profess to charm both the flocks and the rural belles with this plant.

The Germans to this day present a hat of Vervain to the new-married bride, as if to put her under the protection of Venus victórious, which is evidently the remains of ancient customs.

Vervain is now very properly made the emblem of superstition.

PROPAGATION OF THE MOUTAN PÆONY IN CHINA.

" In the beginning of October, large quantities of the roots of an herbaceous Pæony (a variety with small single flowers) are seen heaped up in sheds and other outhouses, and intended to be used as stocks for the Moutan. The bundle of tubers which forms the root of an herbaceous Pæony is pulled to pieces, and each of the finger-like-rootlets form a stock upon which the Moutan is destined to be be grafted. Having thrown a large number of these rootlets upon the potting-bench, the scions are to be brought from the plants which it is desirous to increase. Each scion used is not more than an inch and a-half or two inches in length, and is the point of a shoot formed during the bygone summer. Its base is cut in the form of a wedge, and inserted in the crown of the finger-like tuber just noticed; this is tied up or clayed round in the usual way, and the operation is completed. When a large number of plants has been prepared in this manner they are taken to the nursery, where they are planted in rows about a foot and a half apart, and the same distance between the rows. In planting, the bud or point of the scion is the only part which is left above the ground; the point between the stock and the scion, where the union is destined to take place, is always buried beneath the surface. Kempfer states that the Chinese propagate the Moutan by budding; but this must have been a mistake, as budding is never practised in the country, and is not understood. He was probably deceived by the small portion of scion which is employed, and which generally has only a single bud at the apex.

" Many thousands of plants are grafted in this manner every *Autumn*, and the few vacant spaces which one sees in the rows, attest the success which attends the system; indeed, it is rare that a graft fails to grow. In about a fortnight the union between the root and the scion is complete, and in the following spring the plants are well established and strong. They frequently bloom the first Spring, and are rarely later than the second, when they are dug up and taken to the markets for sale in the manner I have described. When each has only one stem and one flower bud, it is of more value in the eyes of the Shanghae nurserymen than when it becomes larger. In this state it is more saleable; it produces a larger flower, and it is easily dug up and carried to the market. I could always buy large plants at a cheaper rate than small ones, owing to these circumstances.

"In the garden of the Mandarins it is not usual to meet with the tree Pæony of great size. There was one plant near Shanghae which produced between three and four hundred blooms every year. The proprietor of it was as careful of it, as the Tulip fancier is of his bed of Tulips. When in bloom it was carefully shaded from the bright rays of the sun by a canvass awning, and a seat was placed in front, on which the visitor could sit down and enjoy the sight of its gorgeous flowers."

(*Fortune, in Paxton's Flower Garden.*)

THE PROSPECT OF FLORICULTURE.

BY MR. GEORGE GLENNY.

Those who have had the curiosity to look into the history of this pleasing science will have learned that, although one of the principal means of improvement, and the pursuit to which we owe the most important feature on English Gardening, it began among the humble classes, and has gradually worked its way upwards, without the aid of professional gardeners, who have in many instances been obliged to learn it, and practise it, for its own merits. There is no more credit, in a scientific point of view, due to the man who changed the Crab into an Apple of superior kind, than to the cultivator who converted the Briar to a Rose, or the "Bear's-ear" to an Auricula. For aught we know, nature, unaided by anything but high cultivation, may have originated the first grand deviation from the simplicity of her wild flowers and fruits; but from time to time almost immemorial, florists have gone on producing from seed the finest specimens of flowers, which until lately were not recognized or appreciated by the higher classes of society, in the same way that improvements in fruit were recognized and appreciated by the mass; simply because flowers gratified taste which was not universal, while fruit satisfied the animal appetite, which reigned paramount everywhere. The common flowers were grown in the most noble establishments, where the improved varieties were rarely seen; and it is only of late years that the perseverance and the success of the florist has given rise to the emulation among plantsmen, and hybridizing, as it has been commonly, though improperly called, has become one of the most general features in horticulture as well as floriculture; nay, gentlemen's gardeners, who used to treat the humble florist with sovereign contempt, and laugh at his enthusiasm, are rapidly becoming acquainted with a branch of gardening to which they were formerly strangers, and many have become practical florists. The properties which constitute a good flower have become more generally known; and the very fact of a man being able to try the merit of anything he raises by an unerring test, has induced many to sow seeds, and raise new varieties. The work of a gentleman's gardener requires a man of steady habits and sound judgment; but besides these essentials a florist must be a man of *taste;* and those who, beyond the mere requisites for a gardener of the old school, happened to possess a taste for the superior flowers have now, and have had for some time, ample opportunities of increasing it; for the nobility and gentry are no longer content with the plants and flowers that once reigned superior in every first-rate establishment. Gardeners are now imitating the humble classes of amateur-florists, to whom we owe the great improvements in flowers. How few of the noble varieties of Carnations and Picotees can be traced to professional gardeners; even of those which bear the name of professional nurserymen and dealers, not one in ten belonged to them, till they were purchased of some less pretending but more useful cultivators; they are but seen beginning to do what has hitherto been done for them in raising seedlings. We know there are florists in the trade who have raised many valuable flowers, but the chief of them confirm our statement, for they were not brought up florists by profession, but have raised themselves into eminence as dealers, by their success as raisers of florist's flowers.

The hybridizing of plants, condemned by botanists, because it, as they alleged, destroyed botanical distinctions, and rendered the originals mere weeds in comparison with the improvements produced, is only an imitation of what florists have been doing for centuries; it is simply the progress of floriculture which aims at improvement, and is rapidly spreading throughout all the ranks of professional and amateur gardeners. It is seldom that the raiser of a new and good thing gets the credit, or the proper advantages of producing novelty. He parts with it to some nurseryman or dealer for whatever he can get, and forthwith the buyer has all the credit, and nearly all the profit of its production. True it is that dealers also now raise flowers, but for one good one they raise, they buy and adopt of other people a dozen. The stamp of a good flower has now become familiar, the properties are read and understood by everybody who takes a delight in floriculture, and it will lead ultimately to better prices for the raisers. The only drawback to universal improvement is "stand-showing," because middling varieties, easily grown and tolerably certain, are produced to the disparagement of stands, and prevent uniformity of quality, and yet "stand-showing" is inevitable where general shows are held for the admission of the public, because size and quantity are, and always will be, held to be necessary. What chance would some of the coarse gaudy kinds of anything stand against superior models, in class-showing? Yet when twelve are shown together, the coarse ones perhaps out number the best in every stand, and the same great rough blooms prevailing in all, more or less, the individual merit of certain flowers, is totally lost. Dahlias will, if we have three or four years like the last two, become frightfully degenerated, unless the downward progress be arrested by class-showing, and the best models allowed to win. Pansies improve, but how few come up to the standard of the best! how necessary has class-showing become, on this beautiful flower! What can be so useful in driving inferior varieties from cultivation? Pinks, Carnations, and Picotees, sadly require weeding; and the same may be said of almost every other flower and plant having made a respectable approach towards perfection. Class-showing, if universally adopted, would in a short time lead to wholesale banishment of inferior varieties, and the general cultivation of the best models.

REMINISCENCES OF GARDENS IN THE YEAR 1850.

BY RISCEMARA.

EARLY in last year it was my lot to visit the Botanical Gardens at Bury St. Edmunds, Suffolk, which is entered by an ancient and lofty arch, formerly the gateway to the abbey; it is bounded on one side by a high wall, and interspersed with various ruins. At the inclement period of my inspecting these interesting localities, my effort to do so was repaid by the numerous plants of the Cactus tribe, which are there cultivated under glass, with marked success. Bone-dust, mixed with the usual soil, had been found to answer well for this curious tribe. Against the ancient wall attempts were making to acclimatize many exotics; and, if successfully, some account of the kinds, and the processes used, would afford useful information to the numerous readers of this valuable periodical.

The gardens visible from railway trains are in many parts very attractive, and relieve the monotony of the transit to the travellers and to those who are stationary; the amusement of attending them must be a solace to the mind and invigorating to the health. The "cuttings" in the Eastern Counties Railway present frequently a gay appearance in spring, when the Furze, Yellow Broom, blue Hyacinth, Primroses, &c. greet our vision as we pass rapidly by. In the beginning of summer the garden at Wisbech, alluded to last year, had, amongst other attractions, a number of the beautiful and still rare Martynia Fragrans and Proboscidea, forming a long line near the gravel-walk in front of the greenhouse and vinery; the leaves were vigorous and the flowers abundant. The gardener had raised from seed a large pink Verbena, its trusses and flowers resembling in size a luxuriant Cowslip: the Musa Coccinea was showing its incipient crimson blossoms in the conservatory; and on the lawn the Spiræa Lindleyana exhibited its snowy pendant blossoms in great beauty. In the autumn, in the grounds of a gentleman near Halstead, I saw the Araucaria excelsa, or Norfolk Island Pine, sheltered in a grove; it had been removed from Glazenwood, and had stood out one winter. I supposed it to be about twelve feet high, and its effect, surrounded by English forest trees, was remarkable. A bank lined partially with trunks and picturesque branches of trees, upon which many rare Ferns were flourishing, was an appropriate boundary on one side of the walk leading through a superb collection of Rhododendrons, &c. to this grove; one of the Ferns particularly attracted my admiration; I was told it was the Cambricum, and should like to know more of its habits and localities. Near the mansion a numerous collection of the tea-scented China Roses were in flower; their richness, variety of colour, and delightful fragrance, made me surprised they are not more cultivated; they were considered able to bear one winter out of doors: in the conservatory the Ixora coccinea reared its showy head of blossoms. From this pleasant vicinity we were soon in North Wales; and at the little bathing place of Towyn, in the grounds of the Corbett family, is (according to a guide-book) the largest evergreen-oak in Britain; we should have visited it had we known whilst there; I merely record the circumstance to elicit information. The beauty of the rocky scenery near the road-side was greatly enriched by the contrast afforded by the orange-coloured blossoms of the Ulex manus (dwarf Whin) interspersed with purple Heaths, graceful Ferns, pink Catchfly, &c.—an effect which might be successfully imitated in ornamental rock-work. At Tan-y-bwlch Hall, the immense Rhododendrons had a striking appearance in their elevated region, which commands the vale of Festiniog to Harlech Castle: a white Salvia patens was greeted as a novelty in that romantic garden on the mountain's side. At Beddgelert, as we walked through the grounds belonging to the hotel on our way to Gelert's grave, a Camellia was growing in perfect health, with dark-green leaves; it was a bush about five feet high, of a handsome form and redundant foliage, and had stood there at least during one winter; at its base a Cyclamen was in full flower. Whilst walking on a terrace at Caernarvon, elevated far above the river, in sight of the ancient castle, on our way to explore the site of Segontium, we were attracted by a Passion flower, covered with *ripe fruit* of a bright red colour; the tree had been trained up the front of the house, and the effect was singularly beautiful. (What species was it?)

At Chester, a seedsman very kindly indulged my curiosity by allowing me to inspect some bunches of small scarlet berries which were in his window; he told me they were from the scarlet Elder, and had been sent to him. If produced abundantly the tree must be an ornamental one in the autumn, and deserves to be more known. In the garden of a gentleman near Bradford, in Yorkshire, noted for its fine collection of Roses, &c., I was surprised to see amongst many Ferns, the Ruta Muraria, which I have four times vainly attempted to grow by endeavouring to imitate its native localities, flourishing on the ground near the delicate Allosurus crispus. A specimen of the double Calluna vulgaris was shown to me; it is extremely elegant, and bears minute examination. In another gentleman's grounds a number of self-sown Rhododendrons were springing up beneath the parent shrubs; the gardener had selected some, of which he had formed an entire bed, and will no doubt feel much interest in watching their progress. Several meadows near East Retford were very gay with the wild autumnal Crocus. Arrived at home, the delicate blue flowers of the Ceanothus azurea hybrida, greeted our eyes; also numerous Cinerarias, which had been planted out after blooming, as recommended in the

Floricultural Cabinet, and, being again in flower, rendered the American bed gay at a late period of the year. I am sorry to record that I perceived on the fourth day of the new year the flowering bunches on our common laurels were about one inch in length, and therefore liable to injury, should the present mild winter be concluded by frosty weather.

NEW AND FIRST-RATE PELARGONIUMS.

BY ORION.

Several articles under the above title have lately appeared in your contemporary, the *Florist*, with the signature of "Orion" appended (my assumed name), in which I have endeavoured "to do the State some service;" but it seems something has been written which does not please certain parties living a few miles west of the metropolis. The *Editor* in the November Number *requested me* to procure *for him* tables showing the relative popularity of various Pelargoniums, although I asked either himself or Mr. Edwards to do so. At some cost and much trouble, I made application to the most celebrated cultivators, and eighteen gentlemen courteously replied, favouring me with their individual opinions, from the summary of which I drew up the returns as requested, and forwarded them to the Editor of the *Florist*, for insertion in the January number. You may guess the surprise and indignation I felt on looking over the pages of that number, to find the article I sent altogether omitted, and a notice to "Orion", on the cover, stating, the lists could not be printed because I had not supplied my name confidentially; and this, after inserting several previous articles signed Orion, and actually requesting me to procure the desired returns. The notice concluded, "You *cannot conceive* the fuss it has made." It is quite evident that the withholding my real name *then*, could not produce it; but I suppose the number and position of the varieties of Pelargoniums raised by other persons than those of the party connected with the Magazine, are so placed by the contributors, as given in the returns, that their insertion would be an obstacle to self-interested indulgence, and the fuss was occasioned by the integrity of the individuals in their selections. I trust their example will on all occasions be followed.

Having introduced myself into your pages, and explained the "why and wherefore of my appearance," I will now endeavour to give you the information the *Florist*, in its *integrity of principle*, rejected from its pages. Premising that a return was sent to the *Florist*, and afterwards copied into your Journal (at page 316), of the Pelargoniums seen oftenest at the London exhibitions, the following list is drawn up from the opinions of the principal exhibitors *there;* and these names, so well known to your readers, are among the number: Mr. Dobson, gardener to Mr. Beck, editor of the *Florist;* Mr. Black, gardener to E. Foster, Esq., Clewer; Mr. Bragg, Slough; Mr. Turner, Slough; Mr. Moseley, Edgware-road; Messrs. Henderson and Co., of Wellington Nursery; Major Foquet, the raiser of the most popular flower

"Magnificent;" Mr. Hoyle, Reading, of great notoriety; Messrs. Veitch, of Exeter; and several other cultivators, whose names are not so often before the Floricultural public. The summary of the whole returns place the following as the "state of the poll:"—

TWELVE PELARGONIUMS, MOST PERFECT FOR BLOOM.

Crusader (Hoyle's) received	10 votes.
Emily (Beck's)	9 ,,
Gipsey Bride (Foster's)	8 ,,
Constance (Foster's)	6 ,,
Magnificent (Foquet's)	6 ,,
Delicatissima (Beck's)	6 ,,
Brilliant (Topping's)	6 ,,
Gulielma (Beck's)	6 ,,
Virgin Queen (Arnold's)	5 ,,
Field Marshal (Symons's)	5 ,,
Prince of Orange (Hoyle's) *	4 ,,
Salamander (Gaines')	4 ,,
Cuyp (Beck's)	4 ,,
Alonzo (Foster's)	4 ,,

Ajax (Hoyle's) and Rosa (Beck's), two new varieties only just sent out, number 5 each, but they have not yet been sufficiently tested by general growers.

As it is well known that varieties producing the most perfect flowers are in general very ill suited for exhibition and general purposes, as Crusader, Delicatissima, Cavalier, Mount Etna, &c., for examples, I thought it would be a guide for amateurs and those who grow for exhibition, &c., to ascertain the most constant varieties, such as can be best depended upon for good habit and freedom of bloom; and the following is the summary:—

TWELVE PELARGONIUMS BEST SUITED FOR GENERAL AND EXHIBITION PURPOSES.

Constance (Foster's) received	7 votes.
Magnificent (Foquet's)	7 ,,
Gulielma (Beck's)	7 ,,
Pearl (Drury's), very old	7 ,,
Centurion (Beck's)	6 ,,
Forget-me-not (Lyne's), very old	6 ,,
Negress (Garth's), ditto	6 ,,
Alonzo (Foster's)	6 ,,
Star (Beck's)	5 ,,
Emily (Beck's)	5 ,,
Conspicuum (Foster's)	5 ,,
Virgin Queen (Arnold's)	4 ,,
Mont Blanc (Story's)	4 ,,
Orion (Foster's), very old	4 ,,
Ariel (Foster's)	4 ,,

Hoyle's Ocellatum and Ajax received four votes each, but being new varieties they are not yet sufficiently tested, though they certainly are most beautiful and novel additions. If these remarks and tables are considered worthy of insertion in the FLORICULTURAL CABINET, and thereby obtain a far more extensive circulation than they otherwise would have done, I shall be only too pleased to let the world know there was nothing *invidious* or *treasonable* contained in what was sent to another periodical, which, as I have shown, refused to insert an independent article signed anonymously, for certain private reasons.

[We are favoured with the name and residence of our obliging correspondent, and thank him for the lists given. We shall be glad of similar returns of all popular classes of flowers. Such are useful guides to those desirous of procuring only the best flowers.—EDITOR.]

BRIEF REMARKS.

A BED OF LOW PERPETUAL ROSES.—The following on their own roots, or worked on very short (a foot) stocks, will suit the lady who solicits the names of a dozen varieties for a small circular bed :—Geant des Batailles, Ami Vibert, La Reine, Duchess of Sutherland, Duchesse de Montpensier, Celina Dubos, Madame Desprez, Fellenberg, Jaune Desprez, William Jesse, General Negrier, Baronne Prevost. These will bloom till November, or later if the season be mild as the present is. The list combines all the colours of Roses.

CHINA, GERMAN, AND TURKEY ASTERS.—Early last season I purchased a good packet of each of the best (so advertised) Asters bearing the above titles, and having a new pleasure garden of extent, I determined on having a first-rate display of these beautiful flowers, and for as long a period as possible. The ground being newly broken up, I had *most abundantly* manured. In order to have a long season of bloom, I made a sowing on the 1st of March in pots placed in a cucumber frame then at work. As soon as fit to prick out, I put three plants in each of a small sixty-sized pot. When filled with roots I re-potted into larger, placing them in a frame upon a bed of leaves, which had a gentle bottom heat, and I give all possible air during the day. By the second week in May I turned the plants out into the open ground, and by the first week in July I had a fine display of bloom. A second sowing was made on the 28th of April, they were pricked out in a frame on a south-aspected border, and transplanted into the open ground the last week in June. These came into bloom about the middle of August, and continued till cut off by frost in November. The flowers were of a most extraordinary size, as superior to whatever I had seen before as it was possible to conceive, many of them being five inches across, and the single-flowered varieties larger. This result was in consequence of the extra quantity of old rotten manure which I applied. It was about five inches thick all over the ground, and well incorporated with the top spit of soil. It must be very rich to secure first-rate flowers. . I planted them wide apart, and in dry weather gave a liberal watering from a small pond into which the drainings of a large heap of dung had run. In order to have seeds of each class for next season's bloom, I had the masses planted remote from each other. The single-flowered were grown above a hundred yards distant from the double-flowered, a flower-garden (without Asters) being between, so that I have no fear of my double kinds being injured by impregnation from single ones. Try my method of treatment in a very rich soil, and the plants a foot apart; water as I did, and the result will more than repay.—*A Sussex Amateur Gardener.*

ECHITES.—(Dipladenia of some). These are fine *stove, climbing plants*, and as some of our correspondents have stated they have found some difficulty in growing them satisfactorily, the following method of treatment by Mr. Appleby, in the establishment of Messrs. Henderson, will, we think, if attended to, prove satisfactory.

Towards the end of summer, the season of rest commences by gradually withholding water from those species which have large fleshy roots, and as they have substance in themselves, water is entirely withheld till the time to start them in February or March following. Those kinds not having thick fleshy roots, he gives as much water only as saves them from shrivelling during their season of rest. These too are properly excited in spring.

Compost.—One part loam and leaf mould, or well rotted dung, and three parts turfy sand peat.

Potting.—The outer part of the old ball is carefully reduced so as not to injure the roots. The pots are large to admit of them growing vigorously; well drained. The compost is not sifted, but well broken together by the hand. After potting, plunge in a bark bed, or where bottom heat can be received. Where the stems survive through winter, and side shoots push in spring, three or four only are retained, and the others cut off clean make excellent cuttings (when a few inches long,) to strike in silver sand, under a bell glass, for a stock of plants.

The plants must have water given in a *moderate* degree, so the soil be just moist; they must not be flooded, for, the roots being very delicate, if soddened they speedily canker and perish.

HYBRID RHODODENDRONS.—In the recently published part 4, vol. 5, of the *Journal of the Horticultural Society*, there is an article inserted on hybridizing this tribe of plants, by Messrs. Standish and Noble, of Bagshot, which is instructive and interesting. The following is an extract:—

" As so little is known in connection with the nature and effect of hybridizing amongst plants we shall take this opportunity of endeavouring to describe, with reference to the Rhododendron, some of the peculiarities which a very extensive practice has presented to us. We find that, analogous to what is observed in the animal kingdom, the greater the cross the more healthy the progeny, and that breeding 'in and in' produces weak and deteriorated constitutions. We have a remarkable instance of this in a batch of hybrids raised from Caucassicum album (that being a hybrid), fertilized by its own pollen. The plants are extremely dwarf, with variegated foliage; so dwarf are they that many of them had eight or ten flower buds on when only from four to six inches high, and four years old. They, however, bloomed quite freely when only three years old, and about as many inches high. Flowers produced by these dwarfs were again fertilized by their own farina, and, although seeds were produced and vegetated, the plants could not be kept alive; but after various durations of existence, from two to eighteen months, they finally disappeared. One of the dwarfs above named, which we have called Bride, fertilized with the pollen from another distinct hybrid, has, however, produced some very healthy seedlings. A remarkable example of the varied nature which hybridizing effects in the Rhododendron is afforded in a hybrid raised from R. catawbiense, by a large yellow Ghent azalea. The object was to raise a hardy yellow hybrid, but in this we have been disappointed, as it has proved to be pink, and we have named it Deception. It is an extraordinary cross: we never recollect meeting with so decided a sport. It resembles neither of its parents, being one of our best growers, with foliage large and thick, of a bright green, and, when in a young state, it has the appearance of being coated with varnish. Another remarkable sport is a hybrid, which we have called Towardii, raised from Catawbiense by Alta clarense, being a perfect giant in every respect. The foliage is very fine, and the flowers, both individually and in the truss, remarkably large, each forming a perfect cup. We know no Rhododendron equal to it in size and perfection of flowers."

Rats.—A remark is inserted in the *Midland Florist*, of a miller at Sneinton, near Nottingham, whose mill had been much infested by rats; twelve years ago he took out the soil as low as the foundation of the walls, forming a trench about a foot wide all round; he then carted a quantity of refuse from the gas-works and filled it up: since that time he has not had a rat in his mill.

These vermin being destructive in gardens, perhaps the application, in some way, of such kind of refuse, may be found efficacious.

Dwarf Pinks.—In Belgium there is a celebrated Pink grown in pots, known by the name of "The Dwarf Pink of Verviers." The flower-stem only rises about four inches high, and blooms so profusely that from 150 to 200 are produced from a plant grown in a pot of seven inches across the top. Its culture is particularly confined to the inhabitants of Leige and Verviers, who take an especial interest in it. And besides the original kind, whose flowers are of a delicate rose-colour, they have a race which have smaller flowers, the colours of which are, red, purple, white, and striped red and white, and a pale yellow. They are very fragrant and charming ornaments for the window, where, having the full influence of the sun, they succeed the best: they do well too in the sitting-room.

The process of cultivation to have plants blooming so profuse requires three years' previous treatment. The plants are so densely grown as to thickly cover the surface of the soil, and tends to keep the soil in a moist condition for a longer period than otherwise would be the case.

Camellia reticulata.—Many of the readers of the *Cabinet* are aware that this Camellia is a very straggling grower, and usually becomes an unsightly plant. To remedy this defect, M. Neumann, a celebrated grower of Camellias in France, states, "Last year, selecting a vigorous plant, I commenced to pinch off the young shoots as soon as they were two inches long. The operation was performed about the end of April. This year, the same plant produced three flowers and twenty-seven wood buds or shoots, of which a good number were borne on the wood three and four years old, a circumstance which never happens in the absence of such an operation." This system has been generally adopted by cultivators with other straggling plants, but we have not seen or heard of its being applied to this Camellia by any other individual.

Iron Trellis.—In Belgium, a neat, light, iron trellis, to which plants are trained, is thus formed: there is a centre stem three or four feet high, having three prongs at the bottom to secure it properly when pressed into the ground or in the soil in a pot. At the top there is a frame-work, in form like a parasol. It has three circular rings; and four or six strong wires are secured from the top of the centre stem down the circular frame, and to each wire a branch or shoot is trained, and extending beyond the lower ring the drooping flowering-shoots have a very pretty appearance.

Tulips of 1850.—Our respected friend, the editor of the *Midland Florist*, is an ardent cultivator of Tulips, and wisely takes notes in the blooming season of the properties of the best. The following abridged remarks are from what he has recorded:—

Polyphemus (feathered bizarre), highly pleased with even the mutilated specimen shown at Belle Vue.

Magnet (a feathered bizarre), bloomed in his own collection; combined to perfect purity, the edging was laid on in a remarkable manner, not feathering, but plated.

Leonidas, a London, or south country, flamed bizarre; pure, good form, regular in its marking, and standing well up; first-rate.

Rhea Sylvia (Dixon's), feathered-rose; most beautiful.

Earl Stanhope (Waters's), a deep rosy-claret; first-rate in form, purity, and substance.

George Glenny, a light-beamed Byblœmen, of good form.

Hampden (Finlayson's), raised from Polyphemus, but is superior to it in colours, being black, on rich yellow.

New and Superb Roses.—" The list of Moss Roses has amazingly increased of late years—' quantity at the expense of quality ' I fear is the case. I, however, recently noticed at Brussels a beautiful variety, called Aristobule. Its colour is a very pretty pink, slightly shaded and mottled. This will, I think, become a favourite with your Rose cultivators. There was also a novelty, in fact, a great one. Picture to yourself that old and deserved favourite, Crimson Perpetual: well then, take from the plant its beautiful deep pink flowers, and replace them with creamy flesh-coloured ones, then you have it; but, positively, as the flowers age, they become white. It really is a good thing, very fragrant, and, like the Crimson Perpetual, flowers very freely in autumn. It is called, from its similarity of habit I suppose, Blanche du Roi. Your florists appear to appreciate this class of flowers, and good hybrid Perpetuals and Bourbons are much in vogue here. Madame Clavel is a splendid Rose of this class; colour a lively pink, the tips of the petals being of a darker shade. It is very floriferous, and has attracted considerable attention here. Madame Lamoriciere is a very singular and novel Rose; there is a peculiar transparency about the petals, which I have not noticed in Roses of this class: the colour is a bright pink, the back of the petals being of a much lighter shade. Purpurine is a very nice hybrid perpetual; the flowers are very well formed, and of a most brilliant deep scarlet. This will, I think, be as much admired with you as the famed Geant des Battailles. There is yet another that I find amongst my memorandums, and it has a mark of admiration against it: it is Charlotte Seguier. I think, of all I saw, this was one of my greatest favourites: the flowers were nearly as large as La Reine, and of full and fine contour; in fact, a splendid and excellent-blooming autumnal variety; colour pink.

"You would be surprised at the immense quantity of seedling Roses raised in Belgium. Many, certainly, are inferior to what you already have; and, in fact, I believe it is advisable that even those which, during the warm summers here, flower so finely, should be previously proved in your country.

"In Bourbons, I did not see more than three or four that I considered extra amongst the new ones. General Oudinot is a remarkably brilliant colour, crimson, shaded with purple; the flowers, also, are more than usually double: this, if it opens well with you, will be a general favourite. Deuil de l'Archevêque de Paris, a long name truly, but a fine Rose: it is a very peculiar deep purple-crimson, slightly mottled or shaded with light crimson; as a pot Rose you will, I think, find it very fine. I must now conclude my notice with a fine fancy Rose, called Narcisse de Salvandy. It is a beautiful crimson-purple, the petals margined with cream colour—the florists here say white, but I do not call it pure; nevertheless, it is a most striking sort. This, with the others before mentioned, I think the cream of what I have seen. Nevertheless, Colonel Foissy, Comte Bobrinsky, Jeanne d'Arc, and Madame Guillot are very beautiful, and should, by this time, be introduced into England."—*Midland Florist.*

LANDSCAPE GARDENING.—General leading principles: "A garden should have more or less of simplicity, according to its size and character in its main outlines, arrangements, and furniture. The transitions in it should be easy and flowing, the lines all graceful, the decorations elegant. Very rarely will a small garden bear being furnished with any striking evidence of wealth, or luxury, or elaboration; the hand should touch it so lightly as to leave few traces of its operation; its forms and figures ought all to be gently rounded off, and unite softly with each other. Lawn and gravel, shrub, tree, and flower, must appear to belong to one another, and to fit into the place they occur.

"At the same time the intricacy which arises from a partial and pleasing involution of parts, from slight and insensible changes, and from that artful arrangement of single plants and groups which produce *freshness of aspect and newness of vista from so many points of view*, must not be neglected; for a garden may be all that is correct and tasteful, and classified, and yet, like a well-moulded countenance, prove dull, tame, and void of expression. It is play of feature—a something behind and beyond which has not been explored,—novelty of expression, variation of aspect, an *alluring attraction onwards* after higher beauties, that constitutes, in both instances, the life, the spirit, and the charm. Intricacy is, in fact, the very soul of landscape gardening."—*Kemp.*

Stephanotus floribundus.—" I have had a plant of this fine climber for two years growing in a pot plunged to the rim in a bark bed. It grows well, but has not yet bloomed: what am I to do with it to induce it to bloom?"—*Amicus.*

(Probably you have it in a house where the temperature is constantly high, and where the plant is continuously growing. Now, it requires (as do all others) a season of rest in winter. Remove it now to where it can have a temperature of from 50 to 55 degrees; and at the beginning of March bring the plant back, where it may have from 65 to 70 degrees of heat, and, with proper treatment, it will soon bloom. Care must be taken to have the wood strong, and always well ripened, and bloom to any desired amount may be obtained. A friend of ours has a small stove, which he keeps cool in winter, and at one end he planted a Stephanotus, which is trained across the house lengthways to a wire trellis, the branches about nine inches apart, and the entire surface covered by the plant, and which blooms in vast profusion, appearing as one mass of waxy-white flowers. Their beauty and fragrance entitle them to the attention of all.)

Compost for the Orange-Tree, &c.—In the following compost this tribe of plants have been found always to grow vigorously and be very fruitful:—

Turf.—Three or four inches thick, that has been in a heap a few months, well chopped and broken by the hand: to this a small portion of *dry* bits of manure, and a sprinkling of pieces of sandstone, charcoal, and lime, or plaster rubbish; these well mixed together. A liberal drainage, and water so given on each occasion to keep all the soil moist. During the growing season manure-water should be given once a-week, and the surface of the soil be stirred once a-week, when it is somewhat dry.

Cultivation of the Amaryllis Family.—The following directions more particularly apply to such as A. aulica, fulgida, vittata, formosa, Johnsonia, &c., but will do well for all others:—

" The most favourable time to re-pot the plants is when they attain to their *strongest growth.* Take care *not to break* the ball, but take off about two inches of the surface soil, and carefully *clear*, and then regulate the principal roots and place a layer of new soil in the bottom of the pot. The soil to be, equal portions of loam and leaf-mould: upon this place the bulb in its ball, and fill up around, and press the whole gently down, and give a good watering to consolidate the soil. Place the plants for a few days in a close frame and syringe over head, after which give air, &c. After blooming, the bulbs must have a season of rest, that is, during the three or four last months of the year to be kept very dry—be placed in the pots on a dry shelf in the stove. In January they are placed near the light, free from drip. By-and-by their scapes and leaves begin to grow; then slightly water, gradually increasing the quantity. They will flower and ripen seed well, especially if artificial impregnation has been attended to. Success in ripening the seed depends on the following precautions:—avoid changing the pot from its place; keep the heat at from 10 to 12 degrees Reaumer (that is from 55 to 60 of Fahrenheit) at the least, and never allow it to get below 50 of Fahrenheit; water whenever required, but moderately at a time. The production of seed never injures the bulb."—*M. L. Van Houtte.*

CULTURE OF ONE-YEAR-OLD ROSES IN POTS.—In the *Gardener's Magazine of Botany*, Mr. Saul, of Durdham Down Nursery, near Bristol, writes that, with Roses in pots, *the second season*, "I prefer potting in this way: I procure a quantity of turfs as they are brought from the field, and very rough, pretty dry, well decomposed cow-dung. The pots being drained, I tear off one or two large pieces of the turf, and put it into the bottom of the pot on the drainage, top downwards." On this the ball of roots is placed, and if not sufficient to raise it up as high as is necessary, a mixture of turf and cow-dung is added. Being placed, he tears off pieces of turf about six inches long and two broad, and two deep; about four of such pieces are crammed (end downwards) between the ball and the pot side, and the spaces between the turfs are filled up with large pieces of rough cow-dung; and this being done, some of the mixed materials are added, and the entire pressed together, so that no cavities are left.

He observes, "this manner of potting may appear strange to some," but with proper after-treatment the vigour and the beauty of the plants the following season, will be to them equally novel. Tea, China, and, in fact, any other pot Roses will bloom magnificently. Mr. Saul recommends the plants being kept in a cold frame or pit, south aspect, and plants to be elevated up, pots upside-down, and the plants to be near the glass. All the air possible, so that frost is excluded, is given; but little water in winter. And early in spring some of the top soil is scraped off, and a dressing of the rich mixture compost is given. Manure water applied once a fortnight, through the growing and blooming season. He prunes and trains the plants, so that those which are climbers form pyramids each three or four feet high, or any other desirable shape. This is readily done by having either wood or iron forms to tie to.

AYRSHIRE ROSES.—Five years ago you recommended in the CABINET, that where banks or dells existed in pleasure-grounds or woods that were frequented, it would produce a pleasing appearance to have them covered with the Ayrshire Roses. I was thereby induced to adopt the plan in my grounds upon several steepish slopes and two hollows, and with the most satisfactory result. On the slopes there are a few Sloe-bushes, and against these I had Roses planted. The ground now is wholly concealed; and when the Sloe-bushes have ceased their own floral display they are the supporters of numerous drooping branches, beautifully ornamented with lovely Roses, and the surface o the bushes are in appearance, each, one large Rose-bush, and the slopes a mass of varied beauties. I planted a few at a distance from the stems of some large trees, and trained the shoots up to ornament them, in view from my house, and they succeed well. The first three seasons I watered them in dry weather, but now they are established. I planted the following Ayrshire Roses:—Dundee Rambler, white, edge-pink; Queen, dark purple; Myrrh-Scented, blush, peculiar scented; Queen of the Belgians, white; Ruga, pale flesh; Bennet's Seedling, white; Splendens, white and rose; Countess of Lieven, creamy-white; Miller's Climber, bright purple. I added a few others, which bloom most profuse, although they do not spread as rapid as the Ayrshire: some of the latter have shoots ten yards long. ***Boursault Roses***:—Elegans, crimson-purple, white streaks; Gracilis, bright rosy-red; De L'Isle, blush, rose centre. *Other Climbers*:—Wood's Garland, pink, then white; Myrianthus, blush and pink; Rampante, pure white; Felicite perpetuæ, creamy-white; Leopoldine d'Orleans, white and rose. These are a beautiful collection, and I procured them very cheap. I have had a few round, oval, and irregular-shaped beds planted with these various sorts of Roses. The round and oval beds I had iron rod at the centre of the former, and inclining wires from it to the edge; to these I tied the branches at first, and then allowed the shoots to run rampant: they now cover with a mass of beauty. A stout oak-stake or two, instead of iron, will do equally well for many years. The two formal beds had a formal surface of Roses; but the irregular-shaped beds I had the surfaces formed hill and dale, so as to harmonize with the broad and narrow parts of it. These beds are particularly pretty. I recommend these Roses and methods of ornamenting to all who have the means of adopting the system. The plants have not been pruned, nor will they require it.

EUPHORBIA JACQUINIFLORA.—In your recent numbers mention is made of the flowers exhibited for sale in Covent Garden, and the above named is one of the list. A few days back I passed through the market, and carefully inspected the fine variety of flowers in the shop-windows. None attracted my attention so much as the fine specimens of E. jacquiniflora. I have grown two plants of it the last three years in my small plant stove, and both have bloomed profusely each season. I have a free drainage, a compost of equal parts of loam and sandy peat. I allow the plants a season of rest after blooming, then re-pot, give water, and a higher temperature; and by this process with the two, one started at an early period, and the other midway, of the season, I have a plant in bloom all the year. The plant is of graceful growth, and the shoots are naturally long, curving downwards. The flowers are numerously produced in constant succession along the upper side of the shoots. Each blossom is about the size of a fourpenny-piece, of a *bright scarlet* colour, and borne in profusion produce a most beautiful effect. The plant is easily kept somewhat bushy by stopping the leading shoots, and thereby induce the production of side-shoots, and this object once realized can be readily retained. When the plant is at rest it may be pruned in, and a selection of the new-pushed shoots upon the previous year's branches should be retained, rubbing off the surplus: such become the blooming ones. One or more plants ought to be grown in every stove, or in a warm greenhouse, in summer. It is a charming winter blooming plant, offered at a cheap price, and of easy cultivation.

CALCEOLARIAS.—This flower has long been a favourite of mine. I have annually bought some of the best varieties, and as regularly lost the greater part during the summer, when the bloom was over, till the summer of 1849. An old grower called upon me in the spring of that year, and on my relating the losses I had so long sustained, he requested the detail of my summer's treatment, and on my naming it, he pointed out immediately wherein my failure consisted.

I had been accustomed to place my plants out-doors in the full sun after they had done blooming, and in this situation the pots became much heated, which dried and soon killed the roots, and the plants gradually perished. He supplied me with the following particulars relative to a successful management of the Calceolaria:—

Compost.—Sandy-loam, peat, and leaf-mould, and *old-rotten* cow-dung, in equal portions. A liberal drainage always to be given.

Propagation.—The side-shoots throw out numerous rootlets at the closing part of summer, then take off what is required. If roots appear, pot off singly into four-inch pots; if no rootlets appear, put them off as cuttings, a number in a pot, and place the pot in a cool frame in the shade: they will soon root; then pot before winter. Keep the plants through winter in a cool pit, just from frost and damp; or in a cool, somewhat shady place in a greenhouse. Never make a codling of a Calceolaria plant, so that *at all times* give plenty of air. Re-pot in February into two sizes larger, and when they begin to grow, give a proportionate increase of water; let the water be cold, and once a-week give a soaking of manure-water, for, when growing freely, they are gluttons with food, and show it advantageously too. A second, or even a third shift may be required if the pots become filled well with roots. They will not require shifting after the middle of May. All air, I repeat, must be given, especially as the flower-stems are pushing, so that they may not be drawn up weakly. Keep them vigorous and as low as possible: they delight in a *cool air*, let them have it *at night* too, as this is especially refreshing to them. Never allow the roots to be dry overnight, let them have the *cool damp* through it. During the period of bloom, if you wish to have the plants in a greenhouse, place each pot inside a larger, fill up between with moss, and water them well every evening; it will keep the roots cool. Have the plants where a free air can be admitted. When the bloom is over, place the plants out-doors in a somewhat shady, but airy situation; and if a bed of moss is formed, and the pots plunged up to the rim in it, that also being occasionally watered, it will very much contribute to their prosperity.

Seed should be sown as soon as ripe, the plants be potted off singly as soon as strong enough, and be treated in all respects as above recommended. It is essential to success that abundance of air be given the Calceolaria; keep the *roots cold* as possible, and never use *warm water* or allow the plants to wither.

Now, since I was favoured with these simple directions, I have practised them, and have not lost a plant the last two seasons, and my stock has grown and blossomed vigorously.

FLORAL OPERATIONS FOR THE MONTH

THE operations of the present month are especially required in providing a due sufficiency of those plants it is intended shall make the coming floral season's display, therefore an immediate prompt attention must be given to realize that object, by sowing seeds, striking cuttings, or dividing plants, &c.

IN THE FLOWER GARDEN.

Rose-trees must be planted directly, or success is hazardous. Prune the open-air kinds of the *hardy class* now, and the tenderer sorts next month. Perennial and biennial plants in the flower-bed may be divided. Plant out Hollyhocks as soon as possible, and any of the biennial plants. Pink beds: see that the plants remain secure, and stick some whin or fir-tree branches in among the plants, or make a low hedge of them around the bed, in order to screen the plants from cold wind; a top dressing of fresh soil and well-rotted hot-bed manure should be given Carnations and Picotees. If mildew attacks the leaves sprinkle with sulphur. Let the plants have all air possible; protect from rain. Manures should be laid over the roots of Roses, removing a few inches of the earth, filling up the hollow with well-rotted cow or hot-bed dung, and sprinkle it over with soil, so that it may not dry. If the surface of beds or bulbs has become hard and stiff, stir it over frequently, in order to admit that free atmospheric influence to the roots which is essential to success.

About the middle of the month, if the weather be dry, plant Ranunculuses and Anemones, placing them at five inches apart, and an inch and a half deep from the crown to the surface; and if the soil be dry, after planting, press the surface with a flat board. If the formation of the bed has not been effected, dig out a space half a yard deep, and put all over the bottom a layer of cow manure five or six inches deep, after which fill up with the proper compost (see Articles upon). Be careful that Tulips be firmly secured in their positions, so that they be not damaged by wind. A small protection against strong wind should be provided on the bed side most exposed. Heartsease in beds should have a similar protection, and a little fresh soil spread over the bed. Now is the time to make a plan of the flower garden, parterre, &c., and to mark each bed with the kind of flowers required, and then to prepare a stock to furnish accordingly, whether from the sowing of seed or otherwise, as with Verbenas, &c. Protect the early buds of Tree Peony, &c.

IN THE FORCING STOVE OR FRAME.

Sow seeds of the tender annuals, as Balsam, Amaranthus, Cockscomb, &c., in pots, and the half-hardy kinds, as Asters, Stocks, &c., either in pots or upon a bed of soil, &c. When sown in pots, do not water the surface at the time, but after a few days, if the soil be dry, a gentle sprinkling may be given, and afterwards, till the plants are up, great care must be taken to keep it moist, for when once softened, if the seeds become dry, destruction soon follows.

Cuttings of Fuchsias, Alonsoas, Ragwort, Calceolarias, Cupheas, Salvias, Heliotropes, Geraniums, Lotus, Bouvardias, Anagallis, Verbenas, Petunias, and such like plants for the open beds in summer, should immediately be struck, or the plants will be too weak to answer the purpose. If cuttings were put off in autumn, they should now be potted off singly into small pots, they will then be well established by turning-out time; any long ones amongst them should be stopped, to induce laterals and make bushy plants.

Dahlia roots should be immediately put to force for stock.

Dahlia seed should be sown in pots, and only just covered. Lobelias should be potted singly to have them vigorous by turning-out time. Boxes and pots of Mignonette for succession should be sown. Achimenes, Gesnerias, Gloxinias, &c., should be introduced, to promote their immediate growth, and as soon as the plants have pushed, pot them, singly or otherwise, as desirable. Amaryllis, &c., may be excited in like manner. Hyacinths, &c., approaching bloom, must be placed in an airy, light situation, and to those in glasses give a change of water every three or four days. Pot singly Tigridia pavonia and T. conchiflora into small pots. Sow, in pots, seed of the Chinese Primrose, and as soon as the plants are fit to pot off do so in a rich compost; keep them in heat for a short time, and never water them over head. Calceolarias, too, should be encouraged, to have them large; they, as well as Cinerarias, succeed best when grown in a warm, moist, airy pit-frame, kept at about 56° of temperature; thus kept, and temperature increased with the season, they will bloom luxuriantly, and when coming into bloom may be removed to the greenhouse, &c. Mignonette should be sown in pots for early summer blooming. Fuchsias required for exhibition should now be cut in, so as to have them a good shape, and after having pushed a little be re-potted, thinning away all unnecessary shoots.

IN THE GREENHOUSE, &c.

Pelargoniums, to be superb specimens, should be repotted into their blooming pots (read the several Articles on their culture in previous volumes); they must have a free circulation of air around the plants; it gives vigour to the shoots and prepares them for a higher temperature afterwards without injury, and a stronger bloom is produced. The one year old plants headed down last autumn will have produced young shoots, now a few inches long; thin them. In order to have a succession of bloom, now stop the shoots; this will induce the production of lateral ones, which will come into bloom after the first race of plants has ceased, and continue to a late period of the season. A few more plants, stopped a month later, will supply to the end of the year. (See Vol. XVI., p. 199.) The surface soil in all pots should be stirred up; it tends to health. Epacris, Correas, Coronillas, Acacias, Cinerarias, and other plants, will now be coming into bloom; water seldom as possible, but when given let there be as much as will moisten *all* the soil. Ericas will still be inactive, give but little water. If any mildew appears, dust with sulphur. Camellias, too, should occupy an airy part, and the greatest care should be taken to keep the soil in an *equally moistened* state, using water of a temperature equal to that of the house. Give weak manure-water alternate with the other. Alstrœmerias, Lilium speciosum, and others, should be re-potted. Any plants which have filled their pots with roots should now be potted into larger. If a syringing of the plants over-head be really necessary, let it be done in the morning of a day which is likely to be fine, and air be admitted freely.

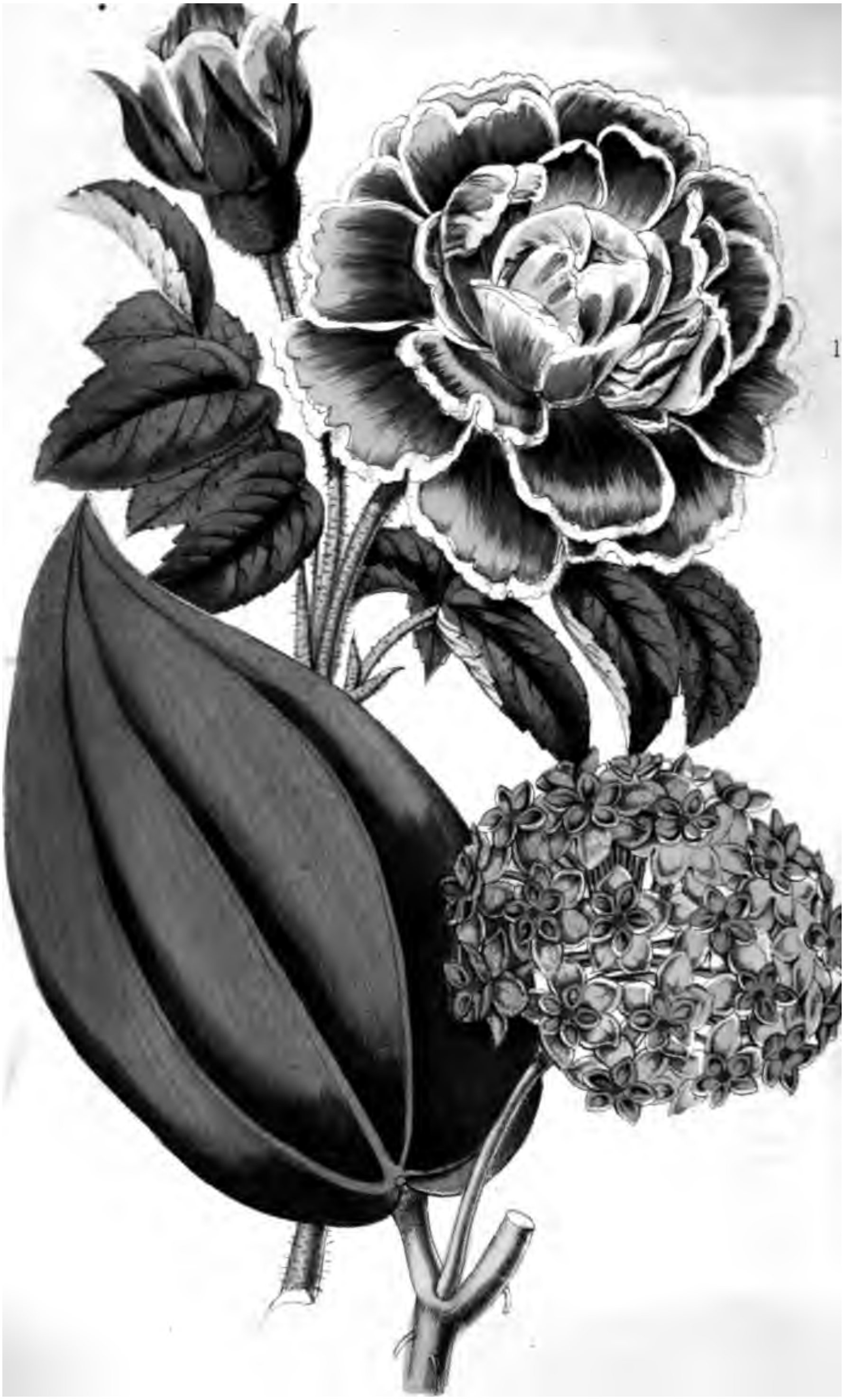
IN THE STOVE.

Old plants of Fuchsia corymbiflora now gently pushed on will come finely into bloom by the first week in May, or, if the season be fine, earlier. Exotic seeds should now be sown (see Articles in former volumes). Plants for forcing must be brought in, as Roses, Lilacs, Azaleas, Acacias, Heliotropes, Correas, Coronillas, Cinerarias, Sweet Violets, Cactuses, Cyclamens, Gardenias, Justicias, Eranthemums, Honeysuckles, Pinks, Gesneria zebrinas, Neriums, Mignonette, &c., and pots or boxes of Hyacinth, Narcissus, Persian Iris, and Crocus. Specimen plants for exhibitions will require re-potting, pruning, &c. Ixoras should be elevated, so as to be near the glass, in order to set their bloom; they must have plenty of air at all times convenient.

NEW FANCY CLASS OF PELARGONIUMS.

NEARLY all the kinds of what are called the Fancy Pelargoniums have been raised within the last five years; and such rapid improvement has been made in the form and substance of flowers, that we do not recollect any other section of flowers that by hybridization has, in the same space of time, reached such perfection in form and substance of flower as this class has attained; and from their dwarf habit, profuse blooming, and prettily painted-like flowers they will become general favourites.

Attempts, however, are now making to have such pretty fine-formed flowers, with an improved variety of foliage, in the form of the Stags' Horn-leaved, the Oak-leaved, the Odour of Rose-leaved, &c.; thus, not only having a more interesting foliage, but possessing the peculiar fragrance which those kind have, as Lemon-scented, Rose-scented, Peppermint-scented, Nutmeg-scented, &c. Some advances have been made in that direction, and, no doubt, the full attainment will ere long be realized. We recommend our readers to attempt at such improvements, and to hybridize too with the best of what are called *the Cape species*, some of them having very elegant-formed foliage; and the habit of that class is very different too, so that in this latter particular something very interesting might be effected. Some of the Cape species have been very rich-coloured flowers, and if those colours and form of foliage are obtained by some of our present fancy class that seed well, as Anais, Jehu, &c., a most interesting race would be secured: and, on the other hand, the impregnation of the Cape species by some of our best fancy class, and the form of flower on the progeny be of that character whilst the plant retained its natural form, this too would be a valuable acquisition. The attention to effect these desirable ends would, in its process, be interesting, and would, no doubt, be amply rewarded. Being possessed of but a few plants of each class, and they may be had very cheap, it is well worth attention.



1. Narcisse de Salvandy. 2. Hoya Purpureo-fusca.

FLORICULTURAL CABINET

MARCH, 1851.

ILLUSTRATIONS.

1. NARCISSE DE SALVANDY ROSE.

THIS singularly handsome Fancy Rose belongs to the Provence section. It was raised by M. Louis Parmentier, of Enghein, a celebrated Rose grower, who, besides the present beautiful variety, has recently succeeded in raising several other very striking ones. The one we now figure is a vigorous growing plant, and a very free bloomer. It is cultivated in the celebrated nursery of M. Louis Van Houtte, of Belgium. It merits a place in every collection of Roses.

2. HOYA PURPUREO-FUSCA.

The lovely Hoya carnosa has long been known in this country, and universally admired. Recently, the delicately handsome Hoya bella has been introduced by Messrs. Veitch, and to them we have now the pleasure to notice the following very interestingly pretty additions.

The one we now figure forms a beautiful contrast with the above-named species, the colour being so very different. The plant is a native of Java, from whence it was obtained by Messrs. Veitch. Mr. Lobb discovered it in the woods of Panarang, where it forms a very handsome climbing plant. It is a very free bloomer, and flourishes with the same kind of treatment as the Hoya Carnosa. It merits a place wherever it can be grown, more especially so when cultivated in connection with the light coloured flowering ones. In warm greenhouses they flourish admirably, and are charming ornaments when trained round pillars or to wire framework.

HOYA CORIACEA. LEATHERY-LEAVED.—Messrs. Veitch's collector discovered this fine vigorous species in the woods on the western side of Java, where it climbs up the trees, and blooms freely. The heads of flowers are large; the blossoms are brown when in bud, and become paler colour in proportion to age, being white at last. It is a fine species both in foliage and flowers.

Hoya campanulata, the Bell-flowered.—This singular species has also been obtained from Java by Messrs. Veitch. Mr. Lobb discovered it in the copses on the mountains of that country. It is a long slender-stemmed twining shrub. The flowers are shallow bell-shaped, each about an inch and a half across; they are waxy, and buff-coloured. The head of flowers forms a neat ball, near four inches in diameter.

Hoya ovalifolia. The oval-leaved.—Mr. Gibson, who was sent by his Grace the Duke of Devonshire to collect plants in India, discovered this beautiful species, which has bloomed in the stove at Chatsworth. The leaves are about six inches long, and the flowers are of a pretty yellow colour, each blossom having the centre (corona) distinctly marked with a cross.

The heads of flowers are of a medium size, but are very delicately handsome. It will make a fine contrast with the first three species we have inserted in our present remarks. It ought to be one of every collection.

Hoya pallida.—Mr. Griffith collected this species in India, in the Burmese Empire. It has also bloomed at Chatsworth. The heads of flowers are in form very similar to those of the Hoya carnosa, but a little smaller; the blossoms are of a pale yellow colour. All the above species are beautiful climbing plants, and well merit cultivation. They grow freely, and bloom abundantly, in a compost of equal parts of turfy light loam and sandy peat, not sifted but broken, and a few bits of charcoal mixed in it, also having a liberal drainage. In winter, they require a period of rest, and at that time care must be taken not to saturate the soil with water, only give just what will keep it moist. All the kinds are easy of increase.

The Genus Hoya now consists of near fifty described species, most of them inhabit moist woods in India and other countries. They have a season of rest during the tropical dry season, when the plants are subjected to much drought.

NOTES ON NEW OR RARE PLANTS.

Aconitum sinense.—It is a native of Japan, quite hardy, perennial. It is a fine autumnal blooming plant. The flowers are borne in rather large racemes. Each blossom is an inch and a half across, of a rich deep violet colour. It grows two feet high. It makes a pretty ornament in the greenhouse in a pot during autumn, as well as in the flower-garden.

Adenostoma fasciculata.—A native of California; quite hardy. It is a heath-like, evergreen, bushy plant, growing two feet high. The flowers are small, white, produced in terminal panicles. Introduced by the Horticultural Society.

Amherstia nobilis.—This noble Indian tree has been in bloom for some time in the stove in the gardens of Mrs. Lawrence, of Ealing Park, and we understand it is the only place it has bloomed at in this country. Its fine pinnated foliage, and large flowers of a deep salmon-pink colour, render it deserving of its specific title *nobilis*.

BANKSIA OCCIDENTALIS.—The Archbishop of Dublin received seeds of this elegant plant from New Holland, and presented them to the Dublin Botanic Garden. A plant (bush) has bloomed in that establishment, which is only three feet high, and had half a dozen spikes of handsome flowers, of a rosy crimson colour, in rows intersected with brown. Each spike is about four inches long. The leaves are five or six inches long, and a quarter of an inch broad. A very beautiful species, suited for a conservatory, or large Greenhouse.

BILLBERGIA MORELLIANA. (Synonyme, Tillandsia Morelliana.)—Mr. E. G. Henderson, of Wellington Road Nursery, obtained this handsome flowering plant from the Continent. It is of the Pine-Apple family. The flowering stalk is long, branched ; the stalk and bracts (small leaves) are of a bright-pink colour, as are the tubes of the flowers, each tube being two inches long. The petals are nearly an inch long, each blossom having three, which gradually unfold and bend backwards. They are of a rich violet-blue, and produce a charming contrast with the bright pink of the other parts of the flower. They require to be grown in a stove, and not to be over-potted, having a season of rest in winter ; re-pot early in spring, and it will soon push into bloom.

CALCEOLARIA ALBA.—This is a very neat shrubby plant, with very narrow curving foliage. It grows two feet high. The flowers are borne in terminal panicles, of a pure white. Each blossom is round, about half an inch across. It is a valuable acquisition, and last summer we found it to bloom profusely. Admirable for the open bed, or growth in a pot. It is a neat plant for the greenhouse in summer, and ought to be in every one.

CYPRIPEDIUM GUTTATUM. SPOTTED LADY'S SLIPPER.—This exquisitely beautiful hardy terrestrial orchid is figured in Mr. Van Houtte's *Flore*. It is a dwarf plant, five inches high, having a pair of broad leaves, and between them springs up a solitary flower, nearly two inches across. The ground is a pure white, marked and spotted with rich purple-crimson. It has bloomed in Mr. Van Houtte's collection. It grows in bogs and marshes in Canada, and at Moscow.

ECHINOCACTUS STREPTOCAULON. SPIRAL-STEMMED.—Mr. Bridges brought this singular species from Bolivia. It has recently bloomed in the splendid collection at the Royal Gardens of Kew. The plant is half a yard high, erect, column-like formed, broad and woolly at the top. The sides are fluted with twelve to fourteen *spirally twisted*, sharp ribs, the furrows also acute. The flowers are produced at the woolly crown, three or four of them, sulphur yellow, each being about in inch across. (Figured in *Bot. Mag.*, 4562.)

ERICA. TURNBULL'S HYBRIDS.—Three beautiful seedlings raised by Mr. Turnbull, Gardener, at Bothwell Castle, in Scotland. *E. Douglassiæ*, was raised from E. Aitoniana, crossed with E. retorta—major ; tube, an inch long, flesh-pink colour, with a crimson ring around the upper part of the tube ; the flat, four-parted end (limb) is white. They are produced at the ends of the shoots, in heads of from eight to twelve in each. The leaves are short, in whorls. A very handsome variety. *E. Marnockiana*, was raised from E. Irbyana, crossed by E. Hartnelli. It is of dwarf habit, and free bloomer. Tube ventricose, an inch long, of a rich crimson red, and under the limb a dark ring. The limb is white. The flowers are borne in terminal heads of from four to eight in each. A very handsome variety. *E. simulata* was raised by E. Aitoniana, being crossed with E. cerinthoides. It is a free bloomer, tube nearly an inch and a half long, of a clear delicate rose colour. The flowers are borne in terminal heads, of [four in each; a very pretty variety. The foliage of the three partakes of the form of Aitoniana, giving the plant a delicate, neat appearance, and, having such large blossoms in terminal heads, produce a fine effect. (Figured in *Mag. of Bot.*.)

GERANIUM THUNBERGII.—A native of Japan. An annual of prostrate growth. The flowers are of a purple colour, three-quarters of an inch across. Neat and pretty.

HELIOTROPIUM PERUVIANUM, var. GEM.—This handsome variety has been raised by Mr. Salter, of Versailles Nursery, Hammersmith. It originated from a seed obtained from H. Voltaireanum. The flowers are in compact heads, similar in colour to H. Voltaireanum, but has a distinct white eye. The plant is of vigorous growth, and blooms very profusely. It is a charming addition to the lovely tribe. (Figured in *Mag. of Bot.*)

LILIUM WALLICHIANUM. DR. WALLICH'S NEPAL LILY.—In habit this very noble flowering species resembles L. longiflorum, L. speciosum, &c., and grows as freely. The flowers are borne singly, terminal, drooping; of a creamy-white colour. Each flower is nine to ten inches, or more, long, and nearly as much across the top of the flower, when fully open. They are very fragrant. It has bloomed in the Botanical Gardens at Belfast. (Figured in *Bot. Mag.*, 4561.)

ONCIDIUM LURIDUM ATRATUM.—The Horticultural Society introduced this handsome flowering plant from Mexico. Sepals and petals are olive and rose coloured; lip a rich crimson, with five dark purple tubercles.

PHYLLOCACTUS ANGULIGERA. THE ANGLE-BEARING LEAF-CACTUS. Mr. Hartweg, who was sent out by the Horticultural Society, to collect plants in California, states " that he first saw this plant near Montanejo, a village in the west of Mexico. It was growing in a forest of oaks, and, from its native association, is supposed to require only a greenhouse habitation in our own country. It proves to be one of the hardiest species. It belongs to what would generally be considered the Epiphyllum section of Cactæ. The flowers are borne at the edges of the flat leaves, each being five to six inches long; brown outside and white within, and five inches across when fully open. It is in the collection of the Horticultural Society at Chiswick. (Figured in *Paxton's Flower Garden.*)

PISTIA STRATIOTES. WATER LETTUCE (Synonyme, Plantago aquatica.)—This singular plant only requires a vessel, or tank, supplied with water, and tufts of it float along the surface, appearing like a half grown *Cabbage Lettuce*, which continues in great beauty all summer and autumn. The flowers are nestled among the leaves, and of little beauty. The roots hang down in the water, and are a very pretty object on lifting out the plant; they are beautifully feathery, and do not attach to any soil, &c.

In the West Indies, this plant covers the surface of stagnant waters, in the same way as the Duck's Meat do in our own country. It requires to be grown under glass in Great Britain, and in a cistern of water at seventy degrees of temperature. (Figured in *Bot. Mag.*, 4564.)

POTENTILLA OCHREATA.—From the Himalaya Mountains. A pretty dwarf hardy shrub. The flowers are terminal (end of shoots), of a bright yellow colour, each about an inch across. Major Madden introduced this handsome shrub to the Dublin Botanic Garden.

SCHÆNIA OPPOSITIFOLIA.—This is a very lovely annual, from the Swan River colony. It is nearly allied to the *Helichrysum*. It is quite equal in beauty to the charming Rhodanthe Manglesii, and the flowers are of a similar form, but erect, and of a similar beautiful rose colour. The flower stem rises a foot or more high, and the flowers are borne in broad corymbous heads, twenty or more blossoms in each. A separate flower is nearly an inch across. Seeds were sent to the Royal Gardens of Kew by Mr. Drummond. Seeds require to be sown early in spring; plants potted off singly, or three in a pot, to have a larger display, and otherwise treated as greenhouse ornamental annuals for summer display therein. It is a very charming plant, and a valuable substitute in the greenhouse, when the usual collection is out of doors in summer. (Figured in *Bot. Mag.*, 4560.)

TAMARINDUS OFFICINALIS. TAMARIND TREE.—The West Indian kind is, in the Royal Gardens of Kew, about fourteen feet high. Its beautiful Acacia-like foliage has a pretty appearance. The flowers are borne in short racemes terminal on the side shoots, each raceme having from six to eight. A separate blossom is an inch across, has six spreading petals, of a pale yellow streaked with red. (Figured in *Bot. Mag.*, 4563.)

VANDA CŒRULEA. THE BLUE FLOWERED.—This is said to be the noblest of the Indian race of Orchids, and Mr. Griffith found it growing among the Khasya or Cossya Hills. The leaves of this wonderful plant are five inches long, by one wide; at their end, two-lobed, and each lobe sharp pointed, so that the end looks as if a piece had been struck off by a punch. The flowers grow in upright spikes. A piece of a stem, but four inches long, bears four such spikes, which are from six to nine inches long, and carry from nine to twelve flowers. Each blossom is about four inches across, of a delicate lilac-blue colour. Messrs. Veitch's have received this very charming plant from their valuable collector, Mr. Lobb.

The above description is of a dried specimen which had been sent, we believe, to Dr. Lindley, by Mr. Griffith. (Figured in *Paxton's Flower Garden.*)

SHOWY PLANTS IN BLOOM AT THE ROYAL GARDENS OF KEW.

BANKSIA SPINOLOS.—Plant ten feet high, having short, Pinus-like foliage. The tufts of flowers are each six inches long, of a deep gold colour, with crimson filaments. Very handsome.

BANKSIA PALUDOSA.—Leaves like those of a small-leaved Rhododendron ponticum. Tufts of flowers, each seven inches long, of a rich brown colour. Very handsome.

BANKSIA MEDIA.—Plant nine feet high; leaves five inches long (what are termed saw-leaved). Tufts of flowers, each six inches long, of a bright golden-yellow colour. Very handsome.

The above Banksias are in the large house appropriated solely to this class of plants. The three now in bloom are well deserving a place in any similar house.

In the Greenhouse.

ACACIAS.—*A. mucronata;* plant five yards high, small lance-shaped leaved, fine yellow blossoms, profuse bloomer. *A. lineata;* fine foliage, flowers in round balls, of a deep go[illegible] colour, produced in vast profusion. One of the handsomest, and deserves to be in every greenhouse. *A. diptera;* the flowers are in round balls, pure white, and contrast prettily with the yellow, sulphur, and golden ones. *A. dependens;* flowers pale yellow. *A. rotundifolia;* very pretty, small foliage, and the flowers in round balls of a deep yellow colour; very handsome. *A. eriocarpa;* the flowers in large balls, of a very rich deep yellow; very handsome. *A. squarrosa;* the flowers similar in size and colour to the last described. *A. pubescens;* panicles of flowers, drooping, a profuse bloomer, with rich yellow flowers; very neat. Like all the tribe, they are interestingly neat, pretty, and many of them fragrant; blooming, too, at this season renders them additionally charming. Every greenhouse ought to have some of them.

BAROSMA DIOICÆA.—A bush three feet high, covered with a profusion of white flowers. Each blossom is about a quarter of an inch across. They are produced in terminal branching panicled spikes. Very neat, and well merits a place in the greenhouse.

CORRÆA BRILLIANTA.—The tube-shaped flowers are each an inch and a half long, bright crimson-red, with a large yellow tip. Very pretty. There were several other species and varieties in bloom. The colours we have recently given, and every one of them—white, scarlet, yellowish-white, blush, crimson, and rose—merit a place in every greenhouse. They bloom, too, for many months, which renders them truly valuable.

CYTISUS FILIPES, with a profusion of its pure white pea-formed flowers, on long drooping shoots, had a neat and beautiful effect.

DAPHNE INDICA RUBRA.—This very fragrant flowering plant is very valuable as a winter bloomer. The flowers are tinged with reddish-purple, similar in size to the old species, D. indica. It is well worth growing.

EPACRISES.—*E. autumnalis;* vivid crimson, fine. *E. magnifica;* bright rosy-pink. *E. campanulata alba;* pure white bells, very neat. *E. hyacinthiflora;* rose, very pretty. *E. grandiflora;* an old but fine species; the bushy plant is four feet high, and as much across, and will be in profuse bloom for many months. *E. nivea;* white, bell-shaped, pretty. *E. microphylla;* white, in long spikes; very neat.

ERICAS.—*E. vernix coccinea;* globe-shaped, of a bright orange-scarlet, blooms freely, very pretty. *E. cerinthoides major;* flowers in terminal heads, tube an inch and a half long, of a rich scarlet colour. By stopping the shoots, laterals are produced, and the plant forms a pretty bush; without this attention, it usually grows naked. *E. pellucida;* tube one inch, rose and white. *E. gracilis vernalis;* small globe, purple, in vast profusion, neat and pretty. *E. colorans;* white and rose, tube one inch, profuse. *E. blanda;* flesh and purple, tube one inch. *E. vernix;* orange, with green tip, globular, very pretty. *E. cerinthoides alba;* white, with a tinge of rose; when advanced, tube nearly an inch long; very pretty. *E. refulgens;* tube one inch, orange, with green tip; pretty.

LEUCOPOGON LANCEOLATUM.—The foliage is small, very neat, as is the habit of the upright-growing shrubby plant. The flowers are small, but produced in vast profusion, in very long spikes, renders it a charming object. It deserves to be in every greenhouse.

LUCULIA GRATISSIMA.—A tall plant in a tub had borne sixty-five heads of flowers, but was now declining. Their beauty and fragrance entitle them to a place in every greenhouse.

MURATTIA (POLYGALA of some) STIPULACEA.—The foliage is of the small, stiff class, and the flowers are small, but produced numerously, in long spikes, of a bright violet colour. It is a beautiful species, and deserves to be in every greenhouse.

SELAGO DISTANS.—A pretty, fine-leaved, shrubby plant, which blooms in profusion. The flowers are small, but are numerously borne in long spikes. Its blooming so freely during winter, too, renders it increasingly valuable and interesting.

A quantity of beautiful CINERARIAS were beginning to bloom, and a fine show will, no doubt, be kept up till midsummer, or later.

In the Stove.

Many plants of GESNERA HERBERTII and ZEBRINA were in splendid bloom; flowering spikes four feet high. One pot of the former had eight fine spikes. Highly ornamental.

ACHIMENES PICTA.—Numerous pots and tubs of this beautiful species in fine bloom. One had nine flowering stems, three feet high. These and the Gesneras are grown in boxes, or pans, about eight inches deep and eighteen across, in loam, rotten leaf-mould, and a liberal sprinkling of small bits of charcoal.

CALLIANDRA TWEEDIA.—Three large plants in beautiful bloom. The elegant tasselled thread-like crimson flowers, in contrast with the Mimosa-like foliage, had a charming effect. This plant for the stove, and the Inga pulcherrima for the greenhouse, ought to be in every one.

CYRTANTHERA AURANTIACA.—Heads of flowers like a Justicia carnea, but of an orange-yellow colour. Very pretty.

ERANTHEMUM PULCHELLUM.—Fine plants, with three heads of rich blue flowers, had a nice effect. This is deserving of a place in every stove or warm greenhouse.

EUPHORBIA JACQUINIFLORA.—This is an elegant plant when in full bloom; its long branches, ornamented with numerous beautiful orange-scarlet flowers, produce a striking appearance. Each blossom is about half an inch across. It ought to be in every stove or warm greenhouse.

PHAJUS GRANDIFOLIUS (**LIMODORUM** of some).—Flower-stems three to four feet high; sepals and petals white outside, chocolate inside; labellum white and rosy-purple. A noble species.

PHAJUS INTERMEDIA.—This is not quite so vigorous, but the inside of the sepals and petals are of a deep nankeen colour, contrasting prettily with the outer white, as well as the cream-white and crimson labellum. Very beautiful.

POINSETTIA PULCHERRIMA.—This noble-looking plant, with its rich crimson and purple large heads, have a splendid effect. One or two, placed in a collection of plants, produce a fine contrast with all others

SERICOGRAPHUS GHIESBRECTIANA.—This is a most lovely plant, and its fine panicles of tube-formed, rich scarlet flowers produce a charming effect. It is deserving of a place in every stove or greenhouse.

A NOVEL METHOD OF PRESERVING FLOWERS IN BLOOM.

BY MR. H. STILWELL, GARDENER, FROGMORE, NEAR ST. ALBANS.

IT is well known that a primary object of the existence of a plant is the proper *maturation* of its seed. This cannot be expected, is a general rule, unless the farina be applied to the stigma of the flower. It has, however, been discovered, that if this impregnation be prevented, the flower will retain its beauty for many days longer than would have been the case had impregnation been effected. To realize the advantage above stated, artificial means must be employed. This is readily accomplished by the removal of the stigma from the flower, as soon as the blossom opens. Even should farina be scattered upon the remaining style, no impregnation would be effected thereby. Such a simple process is very valuable, when it is desirable to prolong the beauty of particular flowers. The flowers of Pelargoniums, being so treated, preserve all their freshness and beauty for at least ten days longer than if not done. This fact is not new, but it is not so generally known as it ought to be.

ON SHOWING CARNATIONS AND PICOTEES.

A Correspondent to the *Midland Florist* remarks upon the great trial shows of these flowers which took place last season, and suggests the formation of an organized Society, to be called "The National Floricultural Society," or such other name as may be approved. One especial particular should be arranged, viz., a *full report* of each exhibition should be drawn up by the judges immediately after the show has been held, and the good *qualities*, or *defects*, of each variety of flower exhibited, as might appear to them to call for the same, should be given. Also to *support* or *deprecate* the practice or *mode of showing* the flowers according to their judgment. We should then, in course of time, have some data to work upon, so as to bring about one uniform system of exhibiting, the want of which I have felt. Here I beg to call attention to the void which has been left as to the propriety or impropriety of using cards, about which so much was written last Spring, not a word can I find either for or against since the great exhibitions took place, although it was predicted, and hoped for, that those shows was to settle the matter.

As to the mode of showing, very great improvement may, I think, be made. For instance, there should be no *collections* of six, or even two flowers, at such exhibitions; the old maxim, "let every tub stand on its own bottom," should be adopted, as a *sine quâ non;* and *the same variety* should be placed *only once.* This would enable a grower in the most remote corner of the kingdom to form a tolerably correct idea of the comparative merits of the numerous varieties in cultivation; whereas, who can tell anything at all about it from the past exhibitions? There should be an additional class, in which to test *seedlings;* where an *equal number* of blooms of *each variety* should compete, but the above rule be reversed, viz. each should be placed as often as its merits surpassed its rivals. I say "*additional class*," because they should also be allowed to compete with the old varieties, where the number of blooms should be unlimited, and therefore only one would be sufficient, if good; but limited in the other class, to show how much better it is than other new ones.

Some one may object to the first mode, and say it would not be fair to a good variety; but is it not equally unfair for one variety only, and, it may be, the same grower, as at the last exhibition, to sweep the deck at once? Where is the competition of the grower in such a case? It was the variety, not skill, that gained the victory; but the other mode would show both at once. Local societies may very reasonably, in the present state of floriculture, leave it open for the exhibitors to put up such flowers as they have, for the want of more or better varieties; but where a society is formed with such pretensions as "The National" ought to have, there should be the most perfect code of laws, both as to *quality* and *showing*, in order to prove to those who only have the chance of reading the reports, as well as those who actually see the flowers, *which* are best, and *why* they are so.

Many of our humbler competitors cannot afford to get new varieties as often as they appear (and I include myself in this class of cultivators), but such as they do possess they may cultivate well, and the above mode of exhibiting would enable all to compete, however small their collection; and there should be scope enough given, by allowing every variety shown to be placed according to its merits. There would be no lack of opportunities for the distribution of the funds, however large they may grow, as there would be fourteen (or, if the scarlet-edged picotees were shown apart from the rose-edged, sixteen) different classes, in some of which there would be upwards of twenty, and perhaps thirty, distinct varieties shown.

Next in order is the (at present) undefined classes of *light* and *heavy*-edged picotees. I have often wondered at, and deeply regretted, the want of decision, or firmness, in judges on this point; particularly when I have seen the *same variety* taking prizes in *both* classes, and that too with blooms *as much alike as two peas could be!* Really, in the middle of the nineteenth century this ought not so to be. Why not say at once, that such only as have a *threadlike margin* of colour will be considered "light-edged," and there would be an end to the difficulty. To this it must and will come ere long I hope. *Colour* should be left untouched, being a matter purely of taste, and differing in many individuals without their being able to give any distinct reason why they prefer one shade to the other; but it is unpardonable to say that, because the colour is *light*, although *broad*, it should take precedence of a narrow or threadlike marking which is of a deeper colour.

SPRING FLOWERS.—ANEMONE.

"From the soft wing of vernal breezes shed,
Anemonies."—*Thompson.*

"That veteran troop who will not for a blast
Of nipping air, like cowards, quit the field."—*Mason.*

"And coy Anemone, that ne'er uncloses
Her lips until they're blown on by the wind."—*Smith.*

THE Greeks named this flower Anemone from *Anemos*, the wind, because it flowers both in a windy season and in exposed windy situations.

Rapin, in his poem on gardens, ascribes the birth of the Anemone to the jealousy of Flora; who, fearing that the incomparable beauty of a Grecian nymph would win from her the love of her husband Zephyr, transformed her into this flower. But to this tale he adds an account better authorised, of the Anemone having sprung from the blood of Adonis and the tears of Venus shed over his body; and it is but common justice to Flora to observe that this is the generally received opinion of the origin of the Anemone. Cowley gives it this parentage in his poem on plants. Ovid describes Venus lamenting over the bleeding body of her lover, whose memory and her own grief she resolves to perpetuate by changing his blood to a flower; but, less poetically than some others, he substitutes nectar for the tears of

Venus, not even hinting that the said nectar was the tears of the goddess:—

> " But be thy blood a flower. Had Proserpine
> The power to change a nymph to mint? Is mine
> Inferior? or will any envy me
> For such a change? Thus having uttered, she
> Poured nectar on it, of a fragrant smell;
> Sprinkled therewith, the blood began to swell,
> Like shining bubbles that from drops ascend;
> And ere an hour was fully at an end,
> From thence a flower, alike in colour, rose,
> Such as those trees produce whose fruits enclose
> Within the limber rind their purple grains;
> And yet the beauty but awhile remains;
> For those light-hanging leaves, infirmly placed,
> The winds, that blow on all things, quickly blast."
> *Sandys' Ovid, book* x.

> " By this, the boy that by her side lay killed,
> Was melted like a vapour from her sight;
> And in his blood, that on the ground lay spilled,
> A purple flower sprung up, chequered with white,
> Resembling well his pale cheeks, and the blood
> Which in round drops upon their whiteness stood."
> *Shakspeare's Venus and Adon*

The Spanish poet, Garcilasso, attributed the red colour only of the Anemone to the blood of Adonis:—

> " His sunbeam-tinted tresses drooped unbound,
> Sweeping the earth with negligence uncouth;
> The white Anemonies that near him blew
> Felt his red blood, and red for ever grew."
> *Wiffin's Translation, p.* 273.

The ancients made this flower the emblem of sickness. Pliny tells us that the magicians and wise men in old times attributed wonderful powers to this plant, and ordered that every person should gather the first Anemone he saw in the year, repeating at the same time, " I gather thee for a remedy against disease." It was then devoutly placed in scarlet cloth, and kept undisturbed, unless the gatherer became indisposed, when it was tied either around the neck or arm of the patient.

Some suppose that the Anemone was made the emblem of sickness in allusion to the fate of Adonis, the favourite of Venus, who changed his body into this flower after he had been killed by a boar which he had wounded in the chase:—

> " The flying savage, wounded, turned again,
> Wrenched out the gory dart, and foamed with pain.
> The trembling boy by flight his safety sought,
> And now recalled the lore which Venus taught.

But now too late to fly the boar he strove,
Who in the groin his tusks impetuous drove:
On the discoloured grass Adonis lay,
The monster trampling o'er his beauteous prey.

* * * * *

Yet dares not Venus with a change surprise,
And in a flower bid her fallen hero rise!
Then on the blood sweet nectar she bestows,
The scented blood in little bubbles rose;
Little as rain-drops, which flutt'ring fly,
Borne by the winds along a low'ring sky.
Short time ensued, till where the blood was shed
A flower began to rear its purple head;
Such as on Punic apples is revealed,
Or in the filmy rind but half concealed.
Still here the fate of lovely forms we see,
So sudden fades the sweet Anemone.
The feeble stems, to stormy blasts a prey,
Their sickly beauties droop and pine away.
The winds forbid the flowers to flourish long,
Which owe to winds their name in Grecian song."

Eusden's Ovid.

It is related by other mythologists that Adonis was restored to life again by Proserpine, on condition that he should spend one half of the year with her and the other with Venus. This is thought to imply the alternate return of summer and winter. The festivals of Adonis commenced with mournful lamentations, and finished with joy and gladness, which would seem to indicate a belief of his return to life.

The Anemone was held in great estimation by the Romans for the purpose of forming wreaths for the head; and there is scarce any flower better calculated to be artificially imitated for the purpose of ornamenting the temple of Venus; for as its flowers are of such various colours, the Venuses of every tint, from the blackest child of Africa to the fairest daughter of Britain, may suit their complexions by wreaths of Anemones.

At what period our ancestors first called this plant by the Greek name is uncertain. Turner writes on it by that appellation in 1568, and observes that "it maye be called in English ROSE PERSELY (Parsley), because there groweth a floure like a single Rose in y^{e} middle of this herbe, which is very lyke persely in the leaves that are aboute the rote."

That the Anemone was a favourite flower, and sought after with diligence to embellish gardens in the age of Elizabeth, will appear by an extract from Gerard's Herbal of 1597, who says, "The stock or kindred of the Anemones, or winde flowers, are without number, or at the least not known vnto any one that hath written of plants. For Dodoneus hath set forth five sorts, L'Obelius eight, Taber Montanus ten, myselfe haue in my garden twelve different sorts, and yet I do heare of diuers more, differing verie notably from any of these; euery newe yeere bringeth with it newe and strange kindes, and euery countrey his peculiar plants of this sorte, which are sent vnto vs from farre countries, in hope to receive from vs such as our countrie yeeldeth."

CULTURE OF DIFFERENT SECTIONS OF ROSES.

BY ROSA.

In the many excellent observations, on the cultivation of the rose which have appeared, I have frequently observed that the rules, though most excellent in themselves, as applied to many species of roses, have usually been too general, and have proceeded on the principle of considering most species as requiring the same modes of treatment, while the great difference in the habits, nature, places and manner of growth, seem to me to point out important variations in the soil, situation, and mode of cultivation required by many of the different species. I therefore would state some of the differences and places of growth, in a wild state, of some of the species, and the variations they seem to suggest in the culture. Though plants are greatly altered by culture yet they generally retain a considerable *bias to the soil and situation for which, by nature, they are formed;* and it is usually within a certain range only, of what I would call their natural habits, that they are capable of improvement by cultivation.

In taking a cursory view of the difference which there appears to me to be among some of the species of roses, I shall, to make myself better understood, separate the genus into five divisions.

In the first division I place Rosa spinosissima and its varieties, the R. lutea, sulphurea, and cinnamomea which, from their slender shoots, small and numerous thorns, and *fibrous roots growing very near the surface* of the ground, are all, I believe, plants in their wild state growing upon *heaths* and places where there is but *little depth* of soil, and are surrounded only by plants of a low stature; they would seem therefore to require to be planted in an *airy* situation, and not to need much depth of soil, as in their natural places of growth they are exposed to the browsing of cattle, and we find them to bear much cutting and shortening of their shoots.

In the second division I include the numerous varieties of Rosa provincialis, centifolia, gallica and muscosa. The varieties of these species are so numerous that this division contains the greatest number as well as many of the most beautiful roses; they appear to me to be plants which, judging from their manner of growth, have in their natural situations to contend with high grasses and other strong growing perennial plants; when overpowered by these they, as it were, remove by sending out roots near the surface of the ground which, when they reach a more airy spot, throw up suckers, these exhaust the old plant, and form a new one in a better situation; the roots of this division, though less fibrous than those of the first, yet are so much so, and grow so near the surface of the ground, as not to require either a strong or deep soil.

The third division consists of Rosa villosa rubiginosa, moschæta alba, damascena, and canina: the roses of this division have much stronger roots than the others, and strike much deeper into the earth. The place of their growth in their wild state is among large, strong growing shrubs and trees: they therefore require a much stronger and deeper soil, and a less airy situation than the two former divisions, and they do not need nor bear so much pruning of the shoots.

The fourth division consists of Rosa avensis, sempervirens, Banksiæ, and multiflora. These roses, in their natural state, trail along the ground, or support themselves by bushes growing near them, they therefore do not require a very airy situation.

The fifth division consists of Rosa semperflorens and indica. The sudden and rapid way in which these roses send forth their shoots immediately on a change of cold to heat, points them out as growing in their wild state on mountains covered with snow a part of the year, and like other natives of such places, with rapidity, taking advantage of an interval of warmth to grow, bloom, and ripen their seed.

ON PROLONGING THE FLOWERING SEASON OF CAMPANULA PYRAMIDALIS.

BY MR. THOMAS DOWELL, OF AMINGTON HALL.

When properly managed the Campanula pyramidalis is one of the most charming ornaments of the floral tribe, especially when grown in pots, either for the summer ornament of the greenhouse, sitting-room, verandah, or terrace. I find many previous testimonies to the same purport are recorded in the volumes of this Magazine. There are, too, particular directions given as to the method of treatment by which specimens of extraordinary size and beauty have been produced. Such being the case I do not think it necessary that I should here enter upon the same ground. There is, however, one particular which will give even additional interest and value to this fine blooming plant, viz. to extend the period of its floral display. This I am glad to state can be done, and as it is said "great effects result from little causes," by the following very simple process:

In the year 1849 I had a fine plant which commenced blooming in July, and its season of great beauty was extended up to Christmas. This was effected by regularly cutting off the decayed flowers, so as to prevent the production of any seed. As above remarked, the plant made a *fine display* until Christmas, and even in January and February 1850 it had some blossoms. The operation is easily done, and the result will most amply repay for the attention.

NEW MODE OF PROPAGATING HERBACEOUS PEONIES.

BY M. DUVAL.

[In Van Houtte's Flora des Serres.]

Over a tuft of Peony, with herbaceous stems, place a box or pot without a bottom; fill the box or pot up with well-worked vegetable mould; the stems have then to make their way through this earth before they can produce any flowers. If the height of the box or pot is from thirteen to fifteen inches, it is of no consequence; the stems always rise through this thickness, and always attain the height fixed for them, and then develop their flowers. The soil should be kept damp all the summer, in order that roots may be formed in a proper way. Towards November or December, the stems may be cut off flush with the bottom of the box or pot, for they will be found furnished with roots throughout their entire lengths. The same stems may be cut into lengths, and each length, having a bud and some roots, will, if placed in well-worked soil, produce a new plant. In planting these lengths, each should be covered with earth about two inches deep, so that the plant may draw nourishment from the soil, and not be killed in frosty weather. In this way the stems of the double-flowered Pæonia officinalis, which are commonly annuals, become perennials, by the absence of light, and the obstruction artificially applied to their growth. All my experiments have been made on this plant, but I am convinced that similar results could be obtained from others of like nature. Although the common Peony is exceedingly hardy and strong in constitution, no mode of multiplying it has been hit upon, except by dividing its roots, which greatly disorders the course of its vegetation. By the new process, many plants can be obtained, and the large roots of the original one remain undisturbed. Propagation by dividing the great roots is exceedingly easy, for each piece carefully treated gives in time a plant; but the plant thus obtained does not bear any flowers for the first three years, after which time development proceeds rapidly; the new process above described is much quicker. Chinese Peonies, which have been hitherto universally propagated by the division of their under-ground stems, may, I have every reason to believe, be multiplied in the new way.

The common purple Peony and its varieties are often planted in the most unsuitable situations; they are put under trees in large parks, or in clumps in pleasure-gardens; their stems are consequently poor, and their flowers not half so large as they should be. Placed in proper situations, the common height of the purple Peony and its varieties is about three feet. In order that a tuft of Peony may grow well, it should occupy a circumference of two yards, and be placed where the gardener's spade can never wound its roots. The plant likes to be left alone and undisturbed; it does not like to be placed near other plants with long roots which intermix with its own, and deprive them of the moisture they require. It is only when these conditions are observed that fine Peonies are produced; if they are put under the shade of a large tree, their stems are weak, and are beaten down by the first storm of wind and rain. The space of two yards may seem unnecessary in the eyes of many amateurs, but let them recollect that it will soon be filled by stems themselves a yard long, and which spread out from a common centre; besides the roots are longer than the stems, and ought not to be interfered with.

There used to be, many years ago, in M. Molé's park, at Méri-sur-Oise, a horse-shoe plantation of clipped Yews. Between each Yew there was a Peony; there was plenty of room for the growth of the Peonies, they had plenty of air and light, were never disturbed in any way, and bore magnificent flowers, which produced a very fine effect. I have never since seen so beautiful a plantation.

The ground intended for Peonies must be well dug and loosened at least three feet deep, so that the roots, which spread in every direction, may act freely and for a long time; for these plants will continue to flourish for forty or fifty years, without showing any symptoms of decay, provided always they are never disturbed. The Peony is one of the few plants not attacked by grubs and insects; this is true of all its varieties. The earwig alone is sometimes found among the petals; but they do not stay long, as the first fall of rain or heavy dew causes them to decamp.

What we have said about the preparation of the earth is of special importance when we are dealing with the Chinese Peonies, for their roots are as long again as those of the common variety, and their stems cannot acquire their proper height; nor can their flowers attain perfection unless there is a plentiful supply of nourishment. Pæonia edulis requires peculiar attention, for its stems naturally grow three, four, or four and a half feet high.

Peonies are extremely useful for decorating gardens, as the quality of the soil is not of great consequence, and the beauty and odour of the flowers are of the highest degree of merit.

BRIEF REMARKS.

POINSETTIA PULCHERRIMA.—All who have a stove should cultivate this plant, whose beautiful floral leaves or bracts create a gay appearance for about three months during the dullest time of the year, and even a small piece introduced into a bouquet is sure to be admired. When I cut down an old plant, in January or February, I select for cuttings those portions on which the eyes are placed rather closely together, and make them into lengths of about a foot, each having six eyes. I insert the cutting over the two lowermost eyes into a tan bed, in which pine-apples are grown. The eyes above the tan will generally all have pushed by about April, and by that time roots will have been sent out from the lower eyes. I then take the plants up carefully, and pot them, shading them from the sun for a week or so; when they have become well established in the pots, or about Midsummer, I pinch the tops off the young shoots, which induces them to double their number, each shoot breaking at the two uppermost eyes. I now encourage them to grow vigorously by giving them plenty of heat, air, water, and root-room. I pot them in a mixture of loam, peat, and manure, in equal parts, and keep them growing on until November, when they begin to show their bright crimson bracts, and they remain objects of great attraction during the winter. I have a plant at the present time with eight heads, or bunches, of red leaves on it, each head measuring from 12 to 20 inches across. The temperature I grow it in varies from 55° to 70° in winter, and from 65° to 90° in summer.—*J. Rust, Pashley, Ticehurst.*

Oxalis Bowei.—It has been stated that this Oxalis should be protected from frost. I have grown it, at Nettlecombe, for these last sixteen years, without any protection whatever. The bed was prepared in the following manner:—The earth was removed to the depth of two feet. I then introduced eight inches of drainage, laying on the top of it a layer of fresh turf, with the view of preventing the soil filling up the interstices. I then filled up the bed with equal parts of well-rotted, turfy loam and leaf-mould, intimately mixed together. In May, I turned out the plants, and placed them so that the bulbs might be three inches below the surface. Thus circumstanced, I have never found them to receive any injury, with the exception of the foliage being destroyed by frost. They flower beautifully every autumn.—*Charles Elworthy, Nettlecombe Gardens, Somersetshire.*

Heating.—I had lately occasion to pass through Guildford, where I saw, in Mr. Penn's shop, in High-street, a model of an excellent heating apparatus for horticultural purposes. It consists of an open tank for bottom heat (or close if required), which sends up a congenial heat, and at the same time warms a range of pipes round the top of the bed. It was heated by means of a jet of gas, and its action was perfect. The amount of fuel required must be trifling, for the boiler was not more than five inches in diameter, and it was set so as to be nearly enveloped by the fire. I understood Mr. Penn to say that he had erected many in the neighbourhood. One gentleman, I know he told me, had three. I had no time, or I should have examined one of them; but I am so satisfied with the contrivance that I intend to give it a trial.—*Charles Phillips, Ealing, Hants.*

Camellias.—These fine plants flourish best in a compost of equal parts of turfy *loam* and *peat*, with a sprinkling of *sharp sand*. The soils not sifted but broken, and a free drainage. To restore sickly plants, early in spring, before they begin to push, turn the plant out of the pot, shake the soil away, prune any diseased roots, and if the top be weak, or straggling, cut back the shoots proportionately, and re-pot in one just large enough to admit the roots conveniently, and use a little more peat than loam in the compost, and a little extra sand. Let the plant be plunged where it can have a little bottom heat, and water *sparingly* till it begins to grow, and then gradually to increase.

After Camellias have done blooming, and just before the shoots push, re-pot them, and let them have an increase of warmth and moisture whilst forming new wood, it will be vigorous, and yet well ripened. which is essential to secure a due supply of flower buds.

To increase Camellias, budding, grafting, and in-arching are adopted, In-arch in spring, just before the shoots push. Bud when the new wood has become firm, and graft the first week in September.—*A Practitioner.*

Camellia Flower-Buds Dropping.—"An old subscriber has purchased at a sale two dozen plants, well set with flower-buds, and now they are dropping off: what remedy can I use to prevent the disaster continuing?"

(Probably the plants have only had a little water given that sunk only an inch or two deep, and the rest of the ball be quite dry; or, if watered often in previous treatment by some one ignorant of the proper cultivation, they may have been soddened by watering: this will cause the buds to drop; and if there be a vast quantity of flower-buds they will, if in clusters, push off a surplus. Camellias, so set with buds, should have a thinning at an early stage; and water, just to keep the *whole* of the ball *moist*, must be given at *each* watering.)

Cinerarias for Winter Bloom.—Early last June I sowed some seed, potted off the plants as soon as strong enough, and re-potted them as they required it during the subsequent period. I placed them in a shallow pit-frame, and early in October a number of them were in bloom, I removed them into the greenhouse, and others into a breakfast-room, and since that time I have had a constant succession in profuse bloom, and apparently shall have till next May.—*Juvenis.*

Epiphyllum truncatum and its varieties.—"I consider that these ought to be brought more into notice than they are at present. If we take into consideration their time of flowering, along with the beauty of the blossoms and the graceful appearance of the plants, we must come to the conclusion that, as a whole, we have little to equal them during the dark days of winter. What have we better for decorating our conservatories and drawing-rooms throughout November, December, and January? By exciting some, and retarding others, I can have a prolongation of bloom during these comparatively flowerless months."

"The method I adopt to insure success, as regards their treatment, is as follows: I grow none on their own bottoms; they are all grafted on Cereus speciosissimus, which I consider a better stock than Pereskia aculeata, as the grafts are not so liable to be outgrown by the stock on the former as on the latter. It is said that Cereus triangularis is best of all stocks. Select some clean healthy plants that have been struck from cuttings the previous year for stocks. In March introduce them into a stove or pit where there is a heat of from 50° to 70°. When they show signs of growing, with a sharp knife make incisions in the angles alternately all round from four to six inches apart, and place one graft on the top, fastening it with a spine of the stock, and proceed in the same manner with the sides. Some bore a hole with a gimlet and insert the scion into it. I prefer the grafts from one-year-old shoots, they require nothing farther than shading, and keeping rather close for a month or six weeks. In the course of two months they will begin to show signs of growing, then give them more air and light, and keep the stocks divested of all suckers as they appear. As regards height, they may be from one foot to six, that all depends upon taste and convenience. A plant grafted one foot high will form a handsome bush, two or three feet across, hanging over the sides of the pot, and supported with a wire trellis underneath; cylindrical trellises are the best for showing tall plants to advantage. As regards culture, presuming the plants have done flowering, and are stored away on a shelf in the greenhouse, or any other convenient place, free from damp, and kept rather dry at the roots, they will require nothing more till about the middle of March. Then they must be brought to the potting-shed and re-potted; this operation requires to be performed very carefully, as the shoots are easily broken. The soil that I find best suited for them is two parts decayed turf, one decomposed cow-dung, and one river sand, or, what is better, the grit that is washed by the rain on the sides of turnpike roads. These well incorporated, together with a little leaf-mould and some pieces of charcoal, make a suitable compost; the pots must be well drained, three inches at least for large plants. Then proceed to shift them very carefully, by rubbing part of the old mould away, and pressing the new rather firmly among the roots; re-adjust the trellises, and the work is completed. Afterwards place them in a gentle bottom heat, either in a stove or pit, and give a good watering, allowing the thermometer to range from 50° to 70°; giving them a syringe in the morning when there is an appearance of a fine day, and they will soon start into growth. Then light, air, and moisture are beneficial to them at this stage, frequently turning the plants, so as to balance them on all sides; give manure water once a week when they are in a growing state, and regulate the young shoots; pinch some out where they are coming too numerously, in order that the plants may be equal on all sides. After they have made their growth, or towards the end of July, remove them to a greenhouse, or cold pit, for a short time, preparatory to placing them out of doors; withhold manure water at this stage, and keep them rather dry, in order that the wood may get thoroughly ripened; they will require protection from wind and rain; place them on coal ashes in a south aspect, at the bottom of a wall or hedge, till they have set their flower buds. Towards the middle of September, remove them to a light airy place in the greenhouse, and introduce them into the stove or forcing pit, in succession, as the demands of the family may require. I have proved by this management that there is no difficulty in getting them to bloom freely. By paying attention to a few minor points, as regards their rest and growth, they will more than amply repay the little labour bestowed upon them. Before the bloom expands, remove them to a cool place, in order to prolong it, and enrich its colour.—*D. H., Cirencester.*

TREE PEONIES.—Dr. Lindley has separated the Tree Peonies from the genus Peonia, on account of the tough leathery coat which is drawn tightly around their carpels, allowing nothing but the stigma to project; this organ, properly referred to what botanists now call the disk, has no existence in the true Peonies; "it is, in all probability, an innermost row of abortive stamens, the filaments of which are united into a cup, while the anthers refuse to appear."

The new genus is named MOUTAN, and the common species M. officinalis. Also, the annual branching Larkspurs are no longer to be called *Delphinium*. Dr. Lindley proposes to re-establish Bauhin's old genus *Consolida*, the grounds of separation being thus stated. "Its petals being reduced to two, and these completely combined into one, remove it from Delphinium. The old genus Consolida should, therefore, be re-established."

THE MA-AN-GA ROSE.—Knowing the interest you feel in the science of Horticulture, I have taken the liberty of inclosing a specimen of wild double Multiflora Rose that grows in this country. It was discovered by a young Wyandotte girl, whose perception of the beautiful is a source of admiration to me. As I had never seen a double wild Rose, and not recollecting that any were described in the books, I thought it might prove a valable contribution to the flora of our country, and therefore determined to forward this specimen to you, and, if a new variety, through your present to the Horticultural Society of Cincinnati, a Rose bush in the spring, when it can be transplanted without hazard. I so much doubted its growing wild that its graceful discovery piloted me through the prairie to the spot three days ago. There, on the point of a ridge, in a space not more than 20 feet square, they were climbing over undergrowth, making the wilderness indeed blossom like the Rose; but to me its situation was most curious, from the fact of its being surrounded, on the declivity of the elevation, by a wilderness of the single wild Rose and Pea Vines. A lively imagination might fancy the ridge to be the burial place of some of the aborigines, thus decorated by pious hands long since mouldered into dust. Should this prove a new variety, I would be glad that it should perpetuate the name of its graceful discoverer, *Teche Nehame Ma-an-ga*, which the United States interpreter tells me may be rendered into English, *The Rose of Wyandotte.* Me-an-ga is an epithet of endearment, meaning bright looking. I called at her mother's cottage, and found their garden filled with beautiful wild flowers, and flowering shrubs, collected by the daughter. One shrub with its long spikes of pale yellow flowers and graceful, fairy, locust-like leaves was very pretty, but her hedge of wild Roses excited most intense admiration. There is a cluster now lying before me, on which there are twenty full blown Roses and eight buds; they have been in bloom since June 15.—*Cincinnati Horticultural Review.*

THE HORTICULTURAL SOCIETY MEETING, held in the Rooms in Regent Street, 18th February.—Mrs. Lawrence, of Ealing Park, sent a charming collection of Orchids, for which a Banksian medal was awarded. It consisted of a nice specimen of the long-tailed Lady's Slipper (Cypripedium caudatum), the handsome Lycaste Skinneri, Cœlogyne cristata, the white-blossomed Odontoglossum pulchellum, Cyrtochilum hastatum, the yellow Oncidium Cavendishii, and cut specimens of Heliconia Braziliensis. From Mr. Ingram of the Royal Gardens, Frogmore, came an exceedingly handsome Begonia manicata. It could not have measured less than three feet high, and as much through, and it was loaded with blossoms which had, however, suffered considerably from travelling. The same establishment also contributed three seedling Cyclamens in the way of persicum, beautifully grown and flowered. A Banksian Medal was awarded for these and the Begonia. Messrs. Lee, of Hammersmith, furnished a small example of Rondeletia (Rogiera) thyrsiflora, which promises to be useful. Mr. Cole, gardener to H. Collyer, Esq., of Dartford, sent the Nerium-leaved Allamanda. This proves to be a smaller flowered kind than the old A. cathartica; but it is nevertheless handsome, and well deserved the Certificate of Merit which was awarded it. Mr. Gaines, of Battersea, contributed Centradenia floribunda, and Rondeletia thyrsiflora. Mr. Kinghorn, gardener to the Earl of Kilmorey, exhibited two beautiful seedling Epacrises. One, named Kinghornii, was white; the other, grandiflora rubra, was red, tipped with white. A Certificate of Merit was awarded for the white one. From Mr. Hamp, gardener to J. Thorn, Esq., of Mawbey House, South Lambeth, came a large plant of the Tankerville Phajus, and a handsome Camellia tree (C. tricolor) some seven feet high, loaded with flowers and flower-buds. A Certificate of Merit was awarded for the Camellia. Blooms of two Rhododendrons, and the Corsican Hellebore, were furnished by the Hon. Fox Strangways, from Abbotsbury, in Dorsetshire. Mr. Tye, of Birmingham, exhibited six Hyacinth bottles of various colours, and furnished with convenient wire supports for the flowers. These are handsome clever contrivances, and if cheap enough cannot fail to be universally approved of. From the Garden of the Society came three species of Acacia, eight varieties of Epacris, Styphelia tubiflora (a useful winter and early spring flowering shrnb), the two-coloured Corraea, a Cape Heath, the useful winter plant Selago distans, the sweet-scented Pittosporum undulatum, and Galanthus plicatus. The latter only requires to be known to be generally cultivated, for it is a great improvement on the common Snowdrop in point of size. The same establishment also furnished the following vegetables:—*Navet jaune de Finlande.*—Seeds of this were received from M. Vilmorin, of Paris. It appears to be a variety of the Malta Turnip. *Variegated Plumage Kale.*—This is used for garnishing; but it is also much esteemed by some, when it is cooked like a winter Green. *Corn Salad.*—This is the common Corn Salad, which is now more used than it has been in this conntry; but it is likely to be superseded by the Italian Corn Salad, *Mâche d'Italie*, seeds of which are now amongst those that are distributed to the Fellows of the Society.

CULTURE OF T. PENTAPHYLLUM.—This plant I find to grow freely if allowed a large degree of pot room, and to be kept in a very airy place in the greenhouse. I find it to do still better, to turn it out, if the plant be moderately strong, into the open border in a warm situation. I have a plant at the front of a greenhouse that is trained to three stakes, and densely covers them to the height of nine feet, having many thousands of its charming green, velvet, and red flowers.

The soil is a good rich loam and peat, half a yard deep, upon a gravelly substratum; I have supplied it freely with water during dry seasons.

At the end of November the top generally dies, I cut it off near to the ground, and cover the same with some dry straw chaff; this is laid six inches deep; over this I place a large milk panshion, which shoots off all wet, keeps the root dry, as well as contributes to keep it from injury by frost. At the return of spring the tuber pushes freely; and during the months from July to November the plant is a perfect picture of beauty and interest.

I have not had occasion to renew the soil of the border where the plant has grown four seasons, but when it is indicated necessary by the condition of the plant. I shall take away the old soil in Spring, nearly to the tuber, replace it by fresh loam and peat, but not to disturb the tuber at all.—*A Country Curate.*

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

THE last month's Calendar contains many things that will require attention now: we refer our readers to it. Shrubs requiring increase by layers may be done now, in a similar way as to the Carnation; some of the tough-wooded kinds do well by having the branch twisted at the part where the cut in laying would have been made. All perennial and biennial border plants to be increased should be parted at once. Add fresh loam, leaf-mould, rotten dung, &c., to beds, before sowing seeds or re-planting. Now decide upon the arrangement of plants for beds of the flower-garden, in order to give plenty of time to prepare a stock of those required. Hardy annuals, to bloom early in the summer, may be sown in sheltered situations. Finish pruning Roses. Take especial care to provide plants of every class required for bedding out on lawns, flower-gardens, &c. German Asters, Geraniums, Stocks, &c., sow immediately.

FLORISTS' FLOWERS.—At this time *Auriculas* and *Polyanthuses* will have commenced growing; admit air on all favourable occasions. Manure water should be given once a week. Sheep's-dung, put into a tub, and soft water poured upon it, in quantity so as it forms a strong liquid, is very serviceable. The dung must be collected for a few weeks before using. Old cow-dung will also answer the same purpose. Sow seeds of above.

Anemones and *Ranunculuses* must be finished planting immediately. If no bed has been prepared for them, it may be made by taking out the soil to the depth of fifteen or eighteen inches, and replacing it at the bottom with a layer three or four inches thick of cow-dung, and filling up with soil composed of *decayed* turfs taken from a loamy pasture. Such as were planted in the autumn will now be making their appearance above ground. It is very necessary to keep the soil closed firmly round the crown of the plant; when this is neglected the bloom suffers. *Tulips* require continued attention, as directed last month. Any that happen to be affected with canker will appear sickly; the roots should be examined, and the damaged part cut clean out. If left exposed to sun and air, the parts will soon dry and heal. Avoid *frosty air* getting to the wound by exposure. If by any casualty the plants are frozen, then, early in the morning, sprinkle the tops over with cold water, and keep them covered over for an hour or so before they be exposed, as the sun must not be allowed to shine upon them until the frost is all out. *Carnations* and *Picotees* may, at the end of the month, receive their final shifting. The pots known as No. 12's are the size usually employed. In potting, place at the bottom two inches deep of crocks, to give free drainage. Use a compost—which is best if it has been previously prepared and become well incorporated together—of these proportions: two barrows full of fresh yellow-loam, three of well-rotted horse-dung, and half a barrowful of river sand, well mixed: plant in it *without sifting*, by breaking very well with the spade. Place the plants in a sheltered situation out of doors, and let them be carefully looked after. Where frost has disturbed the roots of *Pansies* in beds, they should be pressed into their places, and a top-dressing of rich mould given to them, all over the bed. They *must be* screened from cutting winds by fir, yew, or whin branches. In forming new beds the situation must be where there is the benefit of free air. Plants in pots, under glass, will require shifting into larger sizes, for as this is the period when they begin to grow, they will soon become weak, and bloom out of character, if confined in small pots. If beds of *Pinks* were not planted in autumn, early in this month they may be. In removing the plants, whether out of pots or open ground, be careful to retain all the ball of roots, and as uninjured as possible. Protect beds from cold easterly winds.

IN THE FORCING STOVE.

Sow seeds of any tender and half-hardy annuals that have been omitted. Sow liberally of Cinerarias and Chinese Primroses, for if the plants be properly attended to, they will produce a fine bloom for autumn. In watering tender annuals, &c., it must not be over the tops, or many of the sorts will be rotted by it. The best method is to flood over the surface of each pot, always using tepid water. Annuals sown in frames—*Cockscombs*, *Balsams*, *Thunbergias*, &c.—if large enough to pot, should be in 60-sized pots.

Sow seeds of *Dahlias*, *Fuchsias*, *Petunias*, *Verbenas*, &c., as soon as possible. Seeds of most greenhouse plants will do well if sown now. *Dahlias* propagate. Re-pot and forward *Amaryllises*, *Gesnerias*, &c., as directed last month. *Ipomeas*, *Echites*, and similar plants, may be trimmed in, disrooted when necessary, and brought here to excite early growth.

IN THE GREENHOUSE, &c.

Continue to admit all air possible. Re-pot the various inmates, as required, from time to time, and examine to see that the drainage is free. Supply *Cinerarias* with manure water occasionally. Save them from green fly; smoke or tobacco water must be applied at the first attack by the pest. Pot off seedlings, &c., for successive bloom. Immediately stop the shoots of *Pelargoniums* which are to bloom from June, in order to induce new lateral ones. Let Pelargoniums have plenty of air, but close up early in the afternoon. Syringe overhead twice a-week after shutting up. In watering give enough to moisten the entire soil.

Cupheas, *Calceolarias*, *Verbenas*, *Petunias*, and other young stock, intended either for decorating the flower-garden or to bloom in pots, must, as growth advances, have the shoots stopped, which will cause them to be bushy. *Fuchsias* require similar attention, forming cuttings of the young shoots.

Camellias exhausted with flowering, should now receive a little extra attention. Our practice is to remove them to a cooler situation for three weeks, on the principle of slow breaking, and to give the root a chance of overtaking, in some degree, the expenditure which has taken place in the system. Any pruning necessary is performed at this juncture; no plant can succeed better, after judicious pruning, than the Camellia.

See that Lilium speciosum, &c., are not saturated by watering. Let the Azaleas be re-potted, and they must be pushed on by additional warmth: an increase of pot-room contributes to vigour.

REVIEW.

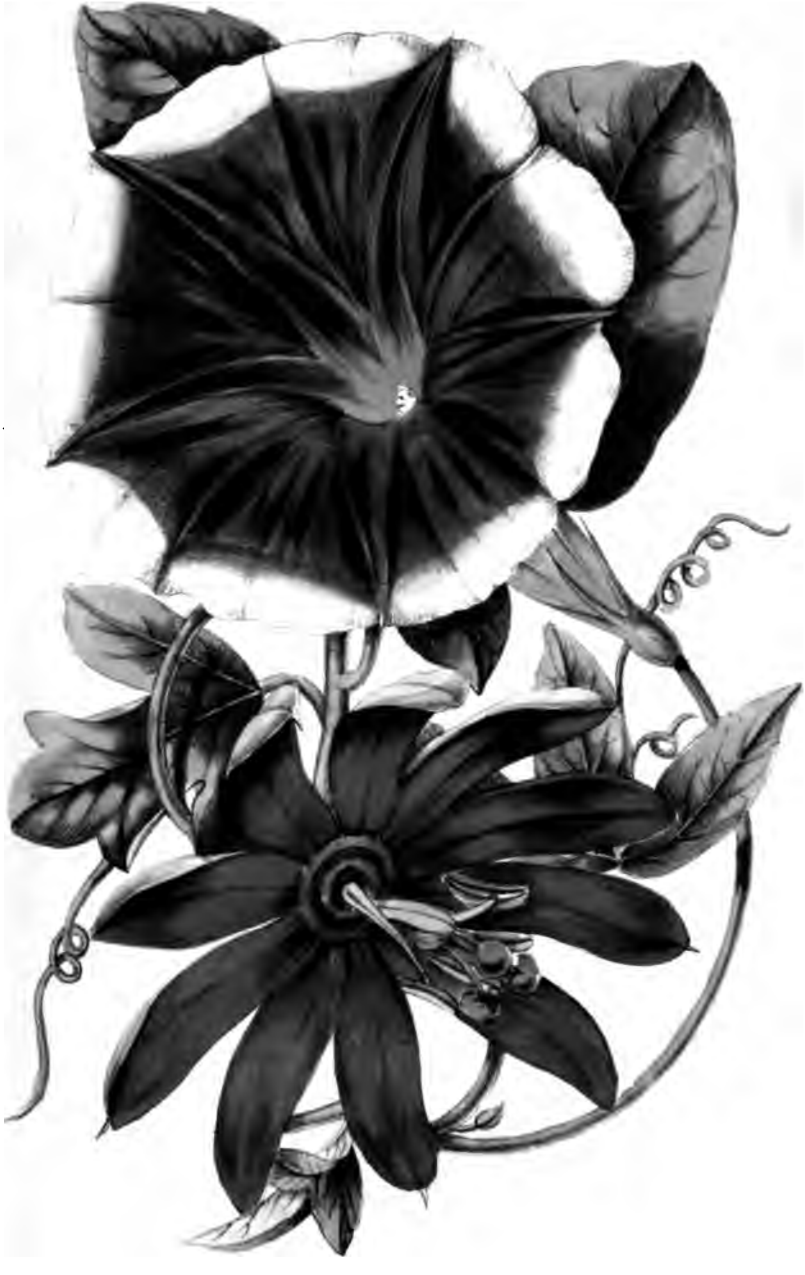
Tyso on the Anemone. (Published by Jackson and Walford, St. Paul's Churchyard, London, and may also be had of the Author, Wallingford, Berks.)

Most of our readers are familiar with the name of the respected author. He has long been known as one of the most extensive growers (and probably the best cultivator) of the lovely tribe of Ranunculuses: he is also equally celebrated for successfully cultivating the charming companions to the above, viz., the double-flowered Anemonies. The excellent pamphlet on the culture of the Ranunculus, which he wrote two or three years ago, was much appreciated, and the one now issued on the Anemone will be found to contain all that can be wished for on the successful treatment of those handsome blooming plants. It embodies the particular treatment pursued by a clever practical cultivator of these and all other florists' flowers. The following is a specimen of its utility:—

" *Soil.*—The soil should be a friable loam, in which gritty particles abound. Decayed turves form an excellent basis for compost. The manure to be added should be vegetable in preference to animal, and be incorporated with the soil, rather than deposited in a layer below the tubers.

" *Time of Planting.*—There are two seasons for planting, viz., the middle of October and the end of January. The early vegetation of such roots as are left in the ground would intimate that the former is the most *natural* season; and, undoubtedly, October planted tubers make stronger plants, throw up more flower buds, flower earlier, and, when the season is favourable, mature finer blossoms than those that are planted in spring. The main drawback is, that the blossoms expand before frosts have ceased, and hence a larger amount of care and protection is requisite. A bed planted the first week in October, 1849, was in beautiful bloom the 12th of May, 1850; and on the 16th of that month, the thermometer only a few yards distant registered 25 degrees, which would have ruined the blossoms had they not been sheltered.

" *Planting, &c.*—Make a bed of your prepared compost in a sheltered spot in the garden, where the subsoil is pretty well drained: 3 feet 4 inches will be found a convenient width, and at least 15 inches in depth. Protect it from heavy rains, so that it be tolerably dry when required for planting. Rake the surface level, and mark the bed in cross rows. Plant five roots in a row, which will allow 6 or 7 inches apart. As the tubers are varied in form and size, the hand or a trowel should be used to make the holes, 2 inches deep, and large enough to admit the root to rest evenly on the soil; avoiding much pressure, as the limbs of the tubers are often slenderly attached to the crown, and are easily broken off."



1. Pharbitis limbata.
2. Tacsonia manicata.

FLORICULTURAL CABINET

APRIL, 1851.

ILLUSTRATIONS.

PHARBITIS LIMBATA.

MESSRS. ROLLISON imported this very beautiful species from Java. We saw it in fine bloom in their collection of plants. It is a *half-hardy annual*, requiring similar treatment to the common Thunbergias. It is a charming object for the greenhouse in summer, and no doubt it will flourish against a good-aspected wall, trellis, pillar, or verandah during that season: Messrs. Rollison consider it to be quite hardy enough. It grows very freely, blooms profusely, and bears abundance of seed. It merits a place in every likely situation, and from what we have seen of it, we believe it will thrive where the Major Convolvulus will, and with the same treatment, after being turned out into the open ground. The plants should be raised early in the season, in pots, and then be turned out in May, where so required, or, being duly repotted, be kept for ornamenting the greenhouse, &c., in summer. Trained to wire frame-work, of any form, it will be a very interesting object.

TACSONIA MANICATA.

This very superb-flowering plant was introduced into this country by the Horticultural Society. The Society's collector of plants discovered it growing in the hedges near the city of Loxa, in Peru. It grows very freely, and is what is generally termed a climbing plant, and when it has room grows very extensively. The Horticultural Society, with their usual liberality, distributed plants of it. A very fine specimen of it is growing in the conservatory of A. F. Slade, Esq., at Chiselhurst, from whence we received it. This plant blooms most abundantly, and the gardener informed us that nothing equals it in brilliancy and beauty when in full bloom, it being literally loaded with flowers. This fine plant deserves to be in every conservatory and greenhouse, where it flourishes either to cover a trellis, wall, pillar,

&c., and, with proper management, a suitable wire-work frame. It is considered to be the finest greenhouse climber, and the striking account given us by the excellent gardener at Mr. Slade's is confirmatory of the fact. This species is easily cultivated, requiring plenty of root-room. A compost of equal parts of turfy-loam and peat soil, with a liberal drainage, suits well. When it grows vigorously, the branches must be trained horizontally in proportion, to check the growth. If the shoots be very numerous, some of them must be cut away. Due care to training neatly will be requisite. Its splendid display most amply repays for every attention. Grown in contrast with the Tacsonia princeps, grandis, mollissima, and pinnatistipula, would produce an interesting sight.

NOTES ON NEW OR RARE PLANTS.

DEUTZIA GRACILIS. SLENDER.—A native of Japan, growing naturally two yards high, its branches being long and flexible. The leaves are small, oval, tapering to a point. The main branches are covered with small side branches, each having a terminal raceme of graceful white flowers. A blossom is about half an inch across. This charming species is in the establishment of Mr. Baumann, of Ghent. There is a plant in our own country called D. gracilis, but its true name is Callicarp Murasaki. The true species is only to be had (now) of Mr. Baumann. It deserves to be in every shrubbery.

DOMBEYA VIBURNIFLORA.—It is a native of the Comerin Islands, near Madagascar, where it forms a fine tree. One plant of it is in the stove at Kew, which is five yards high, and has a large bushy head. The leaves are large, heart-shaped, three-lobed. The flowers are borne in terminal corymbous heads, five inches across. Each blossom is five-petalled, an inch across, white. (Figured in *Bot. Mag.*, 4568.)

ECHINOPSIS CAMPYLACANTHA (Syn. Cereus leucanthus).—Discovered at the foot of the Andes mountains. Several plants, about a foot high, are in the Cactus stove at the Royal Gardens of Kew. The form is nearly globose. The spines are about three inches long, curving inwards. The flowers are produced at the summit, each about six inches long and three across, of a pale rose colour. (Figured in *Bot. Mag.*, 4567.)

FUCHSIAS.—Smith's Seddonii: flower of medium size; tube and sepals rosy-flesh colour, slightly tipped with green; corolla violet-purple. Banks' Voltigeur: tube and sepals red, corolla purple; the sepals curve back much, very like Scarletina reflexa. Banks' Expansion: tube and sepals white, tinged slightly with rose; corolla rosy-red; flower stout, medium size, the sepals spreading out horizontally. (Figured in *Magazine of Botany.*)

MEDINILLA JAVANENSIS.—From Java. A stove shrub, of the Melastomaceæ order. The flowers are borne in short terminal panicles. Each blossom is nearly an inch across, of a pale flesh colour, and the anthers, of a very dark purple, produce a pretty appearance. (Figured in *Magazine of Botany.*)

PASSIFLORA PENDULIFLORA. DROOPING-BLOSSOMED.—From Jamaica. A plant has bloomed in the Royal Gardens at Kew. The flowers are drooping, of a yellow-green; each blossom about two inches across. It is a stove plant, and blooms freely. (Figured in *Bot. Mag.*, 4565.)

PLEIONE LAGENARIA. THE BOTTLE.—A *terrestrial* Alpine herbaceous plant, a native of northern India. Some of this genus have been incorporated with the Epidendrums. The flower just rises (singly) out of the pseudo-bulb. Each blossom is four inches across. Sepals and petals narrow, two inches long, of a rosy-lilac colour. Lip same colour outside, an inch and a half long and an inch across. The margin of the mouth white, with crimson stripes.

PLEIONE MACULATA. THE SPOTTED.—A *terrestrial* Alpine herbaceous plant, also a native of northern India. Sepals and petals broad, two long, white. Lip an inch long, and nearly as much across; white ground, with bright crimson-crested stripes at the margin of the mouth. The interior of the tube of both this and the former species is yellow. Very beautiful and interesting. Mr. Lobb found them on the Khasija Mountains, and sent them to Messrs. Veitch. (Figured in *Paxton's Flower Garden.*)

POLYGONUM BRUNONIS.—A hardy herbaceous plant from Nepal, of the order of Buckwheats.

POLYGONUM VACCINIFOLIUM. THE BILBERRY-LEAVED.—Both this and the former belong to the same tribe as our wild Persicaria. The flowers are in spikes, of a rosy-red and brown colour. Adapted for rock-work, being dwarf, and somewhat trailing. In the Chiswick Gardens. (Figured in *Paxton's Flower Garden.*)

SOBRALIA SESSILIS.—This is a terrestrial orchid, from British Guiana. Flower stems half a yard high, reed-like, terminating with a solitary flower. Sepals and petals nearly white; lip, the tube portion a rosy-purple outside, the inside yellow, terminating in white, with a rosy-fringed margin. (Figured in *Bot. Mag.*, 4570.)

THIBAUDIA MACRANTHA. LARGE-FLOWERED.—A very beautiful flowering evergreen stove plant, which Messrs. Veitch's collector sent from Kola Mountain, Moulmein, East Indies. It is a rather straggling shrub, with brown bark and pretty lance-shaped leaves. The flowers are produced from the WOODY portion of the stem, two or three arising from the same point; they are drooping. Each flower is nearly two inches long, tube-shaped, and the tube widest at the middle, which at that part is nearly an inch through. The blossom is of a pure china-white, yellow at the lower part and at the top rim. The tube is five-angled, and each angular space is beautifully marked with red lines, generally taking the form of the letter V, and the lines more or less united. The flowers are exceedingly pretty; the texture and marking resemble a handsome piece of china or porcelain. It is a most lovely plant when in bloom, and although Messrs. Veitch have it in the stove, it is a very likely plant to succeed in the greenhouse too, keeping it in the warmest and most moist situation therein. (Figured in *Bot. Mag.*, 4566.)

Veronica Andersonii.—This is a very pretty variety, raised by a gentleman at Maryfield, near Edinburgh. It was produced between Veronica salicifolia (V. Lindleyana of some) being impregnated by Veronica speciosa. It appears to be just intermediate between the two, having broader leaves than *salicifolia*, but narrower than *speciosa.* The spikes of flowers are white at the lower part, and of a rich violet above. It is a charming plant, well worth possessing. (Figured in *Paxton's Flower Garden.*)

Wahlenbergia vincæflora (or Campanula vincæflora).—A pretty hardy *perennial* plant; but to keep it through winter it must be taken up and be placed in the greenhouse. It, however, seeds freely, and may be treated in all respects as a hardy annual. It will bloom freely during the entire summer. The flowers are pale outside, but of a bright azure-blue inside, with a white eye and a yellow tube-mouth. Each blossom is an inch across, spreading. A beautiful dwarfish-growing plant, deserving a place in every flower-garden.

THE DIAGRAMS OF THE "GARDENER'S MAGAZINE OF BOTANY."

BY FAIRPLAY.

I am fully aware that to notice the minnows which flirt about in the horticultural stream is to raise up a class of persons who would be oracles if they had any influence, but who are better left to themselves. One of the small fry, who seems to lord it over the uninformed, through five or six pages of the *Midland Florist*, finishes by thrusting his nose into a vice, which pinches harder than he bargained for. He says, towards the conclusion of a very rambling article,—

"If I am not trespassing too much on your space and the patience of your readers, I would just say a few words upon the two diagrams in the above number (he has been finding fault with the work) of the *Gardener's Magazine*—one of a perfect Picotee and the other of a Carnation, which I venture to say *never will be attained*, if the world should continue until it is twice its present age; and for this *very simple* reason: the petals in the same tier are of two widths, as will be evident to the most uninitiated in looking at the plates; and this is a freak, or law, which nature never will adopt, *I'll warrant.* It is not at all necessary she should, for we have a more perfect model in actual flowers at the present day; and if your readers ask where, I reply *in the drawing* of Hollyoak's Duke of Rutland, before alluded to, in the same work, and exactly opposite, as if put there expressly for my present purpose, for the sake of comparison. Then, again, look at the complete rosette the diagram makes! a fit subject for adorning a horse's bridle. There are no less than *seven tiers of petals* in each of these diagrams, *comprised of* forty-two petals, a goodly number to come out of a calyx *the size of a lady's thimble.* If these had appeared before the trial exhibitions, surely there would have been just cause for our northern friends disclaiming the southern model of a perfect Picotee. 'Save us from our friends.'"

Now, sir, it may be raising a "nobody" into importance to notice this rigmarole, but the *Midland Florist* is read by persons who know nothing of the writer, and the great majority of readers look upon what is in a work as the opinions of the editor, although nothing can be a much greater mistake. As the writer in question assumes to dictate in matters he does not even understand, and this dictation may appear the dictation of the work itself, I will offer a few words upon the dictatorial manner in which the writer would propagate his own blunders. The author of "The Properties of Flowers and Plants" avowed, ten years ago, that, in contradistinction to all who had touched upon the subject, he had set models *which never will be attained*, but which would be *the most perfect and beautiful form* that the flower could possess *if it could be attained;* therefore that flower which comes nearest must be the best. Now, after this avowal in the work itself, and made by the author in public meetings and in lectures, what comes of this would-be-dictator's discovery that it *never will be attained.* "I *venture* to say," observes Sir Oracle; what venture was there in saying that which the very author of the "Model" had previously announced as the groundwork of his "Properties of Flowers?" But when he adds, "for this *very simple* reason, the petals in the same tier are of two widths," and warrants nature never commits such freaks, he must forget that nature does not one time in fifty condescend to place the petals in tiers at all, and not unfrequently pokes even one of the guard petals in the centre of the flower. But I shall not quibble on straws—the petals *are not of two different widths;* it is simply an untruth; but it would not alter the case. The author does not anticipate that nature can come up to his models, and therefore the writer's warrantry about what nature will or will not do, however silly and presumptuous it may be, was perfectly uncalled for. When this very sapient gentleman says, "We have more perfect models in actual flowers at the present day," it is a wanton and unjustifiable misrepresentation, and a writer ought to be ashamed of resorting to such means for the sake of a little (unenviable) notoriety. I have conversed with hundreds of better florists than the writer can be—for no good florist would so commit himself—and I have never met with one who would deny that the models laid down in the "Properties of Flowers and Plants" would be PERFECTION, if attained, but that to attain them would be impossible. Hollyoak's Duke of Rutland is a fine flower, as flowers go, but the man who will deny that it would be better with two or three more tiers of petals—I am not talking now about what nature may or may not do—must be no florist; and he who denies that it would be improved if the petals formed a more complete circle can be no judge. This would-be florist dictator must also have his fling at the uniformity of the petals forming a rosette, but when I once see a florist's flower too mechanically true, I may be inclined to listen to such ridiculous objections. Now, with regard to the number of tiers and petals, seven tiers "*comprised of*," as he calls it, "forty-two petals, a goodly number," he observes, "to come out of a calyx the size of a lady's thimble," I beg, with great deference to this dictatorial gentleman, to remind him that there is no condition as to the size of the calyx, and whether forty-two be a goodly number of petals or not, or seven tiers be a wonderful number or otherwise, I will defy him or any other sensible florist to say that four rows are not better than three, that five rows are not better than four; and, further, I will defy him to show that *if a Carnation or Picotee could be produced in every respect as perfect as the diagram*, that there would be a possibility of improving it. He says, "If these had appeared before the trial exhibitions, surely there would have been just cause for our northern friends disclaiming the southern model of a perfect Picotee." It is evident that this gentleman is half a century behind in his knowledge of the floral world. The diagrams complained of, as if a new grievance to this floral Solomon, were as familiar to the majority of those who attended the trial exhibition as some of the flowers themselves. The diagrams had been published and approved many years. The northern growers *never objected to the southern models of what a flower ought to be*, they only objected to the *southern mops*, in which there were too many *petals without form*. The northern never quarrelled, and never would quarrel, with any number of tiers *of perfect petals forming "a rosette*," they quarrelled with the number of ragged petals *not in tiers*. The rigmarole in which the silly stuff we have quoted appears is signed Benjamin Vialls, and I would recommend him another time to be a little less flippant in his attacks upon things above his comprehension. Dictatorial and flippant letters do not come well even from acknowledged authorities, but from an inexperienced aspirant to the honour of appearing in print, who does not even know the work he is underrating, nor the origin of the diagrams he condemns, and who, besides, is profoundly ignorant of the very objects of the author whose work he affects to ridicule, it comes with a bad grace. It may be very convenient for dealers to cry up their flowers, and cry down the models which show what perfection would be; but Mr. Vialls will find it difficult to persuade any man of sense that you can have too many tiers of perfect petals, and flowers too much like a rosette. The diagrams in the Magazine are correct—they are authentic; and it is admitted, after ten years' experience, that *the nearer a flower could be got to the model laid down the better it would be.*

If Mr. Benjamin Vialls had published his notions in a book by itself, with no other *prestige* than it would derive from his name or his subject, I certainly should have left him to work his way alone, but as he was admitted to the pages of a periodical whose editor is looked up to, and, as I before remarked, a vast majority of readers identify the editor with all that appears, I considered I was only doing a service to the less informed by pointing out the miserable blundering of the writer. First he discovers what the author of "The Properties of Flowers" told everybody many years since, and offers his security for the truth of the assurance that the perfection of the models laid down *never can be reached*, then he affirms that which the mere tyro must know to be untrue, that "we have already real flowers that beat the model," and points directly to a sham one, "*a drawing*" of one which he had never seen. Then he quarrels with the mechanical accuracy of a diagram which resembles by its truth a rosette, as if it were possible to have a florist's flower too formal; then with the number of tiers and of petals "to come out of a calyx the size of a thimble;" and, in short, he quarrels with a diagram which has been published many years, as highly displeasing to his floral highness, and speculates what a sight of it would have done at the trial exhibition, where it was as familiar as the flowers themselves, and where the judges actually awarded *the best prizes to the flowers that came nearest to the offending model.* Mr. Benjamin, who wants apparently to be "*Little Benjamin the ruler,*" finishes with a very serious exordium—"Save us from our friends." The greatest benefit that was ever conferred on floriculture was the publication of "The Properties," which commenced in 1832, in which "Properties" the proposed models were one and all founded on *what would be the most perfect, if attained.* All that had been written before was loose, undefined, and with a mind contracted, unable to see further than the best of the flowers already produced. "The Properties," as published, defined to a nicety, in language which the greatest dullard could understand, such models as *there was no hope of realizing;* but from that moment every flower *which advanced a single step in the right direction* was recognized. "Save us from our friends" would apply better to those who seek notoriety at the expense of improvement than to persons who publish well-authenticated facts relating to flowers. I only wish that editors in general would be a little more careful how they admit the dogmas of people of no floral standing, and, if we are to judge by their productions, of very meagre floral knowledge, because, although I acknowledge that an editor *is not properly identified with the opinions he admits,* a very large portion of his readers will, and do, look upon them as identified with the work. Mr. Benjamin Vialls might have distributed half a million of copies of his article without its having the slightest influence, but coupled with a respectable work, whose editor is an authority on many such matters, it required a notice, and I wish him joy of his notoriety. The next time he discovers a TEN-YEAR-OLD NOVELTY to peck at, I hope he will know better than to quarrel with quality, merely because it cannot be obtained. The writing of such an article seems to indicate a general disposition to peck at things beyond his reach: such persons are not fit monarchs for the floral world.

FRENCH DAISY CHRYSANTHEMUMS.

BY A LONDON AMATEUR GROWER.

THE Horticultural Society sent Mr. Fortune to China to collect plants, and in 1846 the CHRYSANTHEMUM MATRICARIOIDES (Chusan Daisy) was introduced to the Society's garden at Chiswick. From this liberal source distributions of the plants followed both into this country and to the Continent. The result has been the production of a new race of

Chrysanthemums, by seedlings being so readily obtained from that species. This has been especially attended to by florists on the Continent, and many of the fruits of their success are now in the nursery establishments of our own country, known as MINIMA CHRYSANTHEMUMS, or POMPONS. A few of their beautiful varieties were figured in the last year's volume of this Magazine. The plants are of dwarf habit, handsome form, bushy, with dense, small foliage, and their flowers small, compact, neat, many of them very elegant, and produced in profusion. They highly merit a place in every greenhouse, sitting-room, or garden; and I doubt not but they will be cultivated for, and be exhibited at, the Chrysanthemum shows as a distinct class.

In order to bloom this class satisfactorily, it is necessary to have the plants got on with as early as possible in the spring. They grow much slower than our old class of Chrysanthemums do, and require a longer period to be properly matured.

Last July I procured from Belgium some other varieties of this new class. The plants were only about three inches high, and with every exertion to get them to bloom, I failed; the plants did not even show flower-buds: but by having nice healthy plants early in spring, such will succeed, by proper treatment, to admiration. This I proved by the first stock of plants I obtained in 1849, suckers of which I potted off early in December, kept them in a cool frame from frost during winter, and repotted twice afterwards. Some of the tribe are perfect gems when in bloom; they appear as if covered with the best double Daisies.

PROPAGATION OF CAPE HEATHS BY CUTTINGS.

BY AN OLD PRACTITIONER IN LONDON.

OBSERVING in the February number that "An Admirer of Heaths" requested information on a successful method of propagating them by cuttings, and desirous that he should be assisted in the matter, I have drawn up the particulars of my mode of treatment, which has admirably succeeded for near twenty years, during which period I have raised fifty thousand plants of this beautiful tribe.

Almost all will strike root freely by cuttings; some sorts, however, requiring a longer period to do so than others. The most eligible wood for this purpose is the *young wood* of the *present year's growth*, when it becomes *partially* hardened, so as not to be liable to damp off. It would be impossible to convey an idea to the uninitiated of the proper state that the wood should be in for this purpose, but the cultivator who knows anything of the matter will readily understand me when I say the wood should be fully matured, but *before* it had attained its *dark* colour, and to be, when slightly pressed between the finger and thumb, *somewhat firm*, but neither *yielding* to the touch nor yet quite *hard*. In regard to the length of the cuttings, much depends on the habit of the different species. Some of the robust-growing sorts may be from an inch to an inch and a half in length, while others of the more shy-growing kinds can only be obtained about half that length.

The cutting selected should be chosen from the *healthiest* plants, and taken off close to where they push from the old wood. In preparing the cuttings, the leaves should be cut clean from the shoot, either with a sharp knife or fine pair of scissors; the end should be cut transversely across, in a neat manner, so as not to leave the wound ragged or bruised. The leaves should upon no account be shortened, neither should any more of them be taken off than just so far as the cutting is to be inserted into the sand.

With respect to the proper season for putting in cuttings of this order of plants, and indeed of most other slow-growing kinds, the spring is the best, as the plants will attain such a size and vigour before the winter as to be able to survive that season.

It sometimes happens, however, that cuttings cannot be obtained in a proper state at that season: when such is the case, recourse must be had to inducing the old plants to make wood fit for the purpose. This is to be effected by placing them in a *little heat* early in spring; they will then make plenty of young wood, which is the best for cuttings. In so extensive a genus it is impossible to state any particular period of the year for commencing the operation of propagation by cuttings of each sort, because some one or other of them are in a fit state for the purpose on almost every day in the year; therefore, the time for putting in cuttings should be regulated rather by the state of the plant than by the time of the year, but generally in spring and the early part of summer.

In extensive nursery collections, where great quantities of plants are wanted, one pot is filled with cuttings of the same species, when such can be got in sufficient quantities; but in private collections this is not necessary, for a few plants of a sort, in general, are all that is required. When this is the case, the kinds selected to be put in the same pot should be nearly of the *same habit*, as can be judged of at the time.

Unless this is attended to, one sort will be found to strike root in a much shorter time than others of the same pot, which makes it more inconvenient when potting them out. This, however, must always happen to a certain extent, for a little difference in the age or firmness of the cutting, even when the work is performed by the most experienced hand, will often make a difference in the time required to strike root.

When the pot is thus filled with cuttings, it should be well watered with a fine rose watering-pot, and placed in a close *shady part of a low close stove;* and if there be a tan-pit of *gentle* heat, plunge to the rim, and cover each pot with a bell-glass. The sand must not become *dry*, or certain death to the cuttings will follow.

However excellent the above mode of striking Heaths may be, it cannot, under all circumstances, be applied in practice, because there are many cultivators who have not the convenience of a stove to place them in. A substitute for the stove may be found in a well-regulated cucumber or melon bed of gentle heat. The reason for applying a gentle heat to the cuttings is to excite them to the greatest possible degree, during which they will, if they are in a fit state, strike root very soon.

The following method of striking cuttings of Heaths I also adopt, viz., to plunge the pots into coal-ashes or rotten tan, or similar matter, in a rather damp, *shaded border*, covering each pot with a bell-glass, and the whole with a close frame and lights. By this method the cuttings are longer in rooting, but as it is within the reach of every one possessed of a garden, however small, and, therefore, as it is attended with less risk from inattention, &c., I recommend it to their attention, for I raise a considerable quantity in this way. It is necessary, in preparing the pots for the cuttings, to select them of about equal sizes, say that of 32's, and to fill them within an inch and a half from the top with broken pots, cinders, coarse gravel, or small stones, over which a thin layer of moss (hypnum) is placed, to prevent the finer particles of mould from being washed down amongst the drainage. The pot is then filled to the brim with fine, *pure white* sand, as free as possible of *earthy or irony* matter; but as this is seldom to be procured sufficiently free of those matters, it may be well to wash it by putting small quantities at a time into a bag, and dragging it frequently through a cistern or stream of water. When put into the pot, it should be well watered, and pressed firmly down, the surface made smooth and level, and the cuttings put in as soon after as possible.

In the propagation of Heaths it has been almost universally maintained that bell-glasses should be used under all circumstances, that is, whether they be placed in heat, in a shady border, cool frame, or pit. When glasses are used, the greatest care must be taken that they be kept regularly wiped at least once a-day, to prevent damp from destroying the cuttings. Cuttings placed in a cool shaded border, frame, or pit, should certainly be covered with bell or hand glasses, and these should remain on until they are rooted, and taken off only for the purpose of being wiped, and any damp or mouldiness removed from the surface of the sand in which they are placed. Regularity in watering, and also in shading, is absolutely necessary to ensure success. When the young cuttings begin to grow, air is gradually admitted to them, so that by the time they are rooted, and fit for transplanting, they may be able to withstand the sun's heat, and free exposure to the air.

CHRYSANTHEMUM INDICUM,

ITS CULTURE, AND SELECT LIST OF THOSE VARIETIES SUITABLE FOR COMPETITION AS CUT BLOOMS.

BY MR. GEORGE TAYLOR, GARDENER TO JOSEPH WILLIAMS, ESQ., STAMFORD HILL, NEAR LONDON.

This showy autumnal flower, which greatly enhances the beauty of our gardens, and more especially the conservatories, during the dull months of November and December, is now claiming the attention of the admirers of floriculture, as a flower worthy of being extensively cultivated for competition, especially so as the tribe blooms at a period of the year when the greater portion of floral beauty is absent. The Chinese take great interest in the cultivation of this flower. It was first introduced into this country from China, in 1764.

A few practical remarks on the treatment as adopted by one who, as being a successful competitor at the annual exhibition of the above flower held in this locality, may not be uninteresting to those of your readers engaged in its cultivation, or about to be so.

I commence propagating as soon as the blooming season has ceased, by filling some 60-sized pots with a compost of sandy-loam; then select my cuttings, preferring the strongest suckers with a portion of root attached to them, and into each pot insert three cuttings. I then place them in a cold frame, not excluding the air entirely from them. I do not advocate striking them in heat, as it deprives them of that *robust habit* in their infancy so necessary for ensuring superb blooms. In the month of April a compost is prepared consisting of one-third yellow loam, one-third rotten turf, and one-third rotten manure, adding sufficient rough sand or grit, to make the soil porous; the whole is then well incorporated. The plants are then shifted from their nursery pots into size 32's, care being taken not to disturb the young roots; they are then placed in the open air, in a situation sheltered from the easterly winds, at a sufficient distance from each plant to prevent their growing weak. During their growth, at intervals, their position is altered, in order to regulate their habits, and prevent them striking root into the ground. In the latter part of June, or beginning of July, I give them a final shift into large-sized pots, providing them with plenty of drainage, and the compost is the same as before, only it partakes of a more porous character. After this they are placed in a situation fully exposed to the sun, and adopting the same practice of removing, &c., as hitherto. I fix a strong stake to each plant, and tie them as required.

Being plants that require a liberal supply of water during their growth, they should not be permitted to suffer from drought, as that would destroy the *under foliage*, and retard their vigour. Neither should the soil be so drenched as to become soddened, as that would injure the plant, and prevent its producing fine blooms. I afford them strong liquid manure water once a-week, from the end of July till the blooming season.

As laterals push forth they are pinched off, but at no period do I stop the main stem. As soon as the *blooming stems* are visible, all are removed but three or four on each plant, according to its strength. When the flower-buds are discernible, I thin them, leaving *one bud to a stem*, preferring the *centre one*, if round and perfect.

The earwigs will now attempt ravages among the buds. Diligent search, morning and evening, should be made for them, or the hopes of the cultivator will be blighted. I place bean-stalks among the branches, into the hollows of which they creep, and in the morning I blow them into a bottle of hot water, which effectually destroys them, and the stalks are replaced.

As the blooming season advances they are removed into the greenhouse. My object being to obtain *superb flowers*, the plants are not checked in their growth by stopping, from which circumstance they become somewhat tall, and to some may appear unsightly; but to remedy this supposed defect we intermix them with the Camellias, the deep green foliage of which affords a pleasing screen to their stems.

At the same time we fix the pots under the stage, or otherwise, as circumstances permit, so that the flowers do not exceed in height the Camellia plants; thus their NOBLE SHOWY FLOWERS have an agreeable contrast with the glossy leaves of the latter.

I have cut remarkable fine blooms from plants grown under a *south wall*, treated in every way as for pot culture. As the blooms expand they require to be protected from wind, rain, and frost. Some of the early varieties require shading during a hot sun; the later sorts have glasses fixed over them, that the bloom may fully develop itself by the time required for exhibition, which at Stoke Newington is about the middle of November. I need not say in the latter practice nice judgment is required in tilting the glasses, so as to admit of the condensed moisture escaping, for if this particular was not attended to, the under petals would be disfigured before the upper ones were fully matured. For ordinary purposes, I consider March a very good month to commence propagating the Chrysanthemum.

For the information of those persons who are desirous of acquainting themselves with the names of the varieties which are suitable for cut blooms, the following list comprises those I can highly recommend. Ere long I hope, and doubt not, but they will vie with the Pelargonium in the number of ardent successful raisers of improved varieties. Among those who have attempted it with success is Mr. Salter, of Versailles Nursery, Hammersmith, whose Annie Salter cannot fail to be admired by every lover of the Chrysanthemum.

Incurved or Cupped Flowers.

Beauty, blush.
Campestronii, deep rose.
Duke, blush.
Defiance, white.
Dupont de L'Eure, purple and orange.
Formosa, creamy-white.
Goliah, white.
Golden-clustered Yellow, golden-yellow.
King, rose.
Lucidum, white.
Nonpareil, rosy-pink.
Pilot, bright rose.
Queen of England, blush.
Rabelais, reddish-carmine.
Two coloured Incurved, red and yellow.
Vesta, white.
Warden, orange.

Reflexed Flowers.

Annie Salter, yellow.
Cloth of Gold, golden-yellow.
General Marceau, buff.
Madame Hardy, white.
Phidias, rose and white.
Princess Marie, rose.
Sydenham, light-red-crimson.
Temple de Salomon, bright yellow

[We saw the winning stands of the flowers exhibited at the last shows above referred to, and such large-sized ones we never saw near equalled elsewhere. They appeared at a distance like fine-sized Dahlia blooms. —Conductor.]

BRIEF REMARKS.

On judging Tulips.—Our respected friend Mr. Slater, of Manchester, has favoured our readers with many valuable articles on the

Tulip; and in a communication in the *Midland Florist* he remarks on the judging of Tulips, that he found it a matter of great difficulty to properly *judge* those Tulips which had *stained bottoms*, *narrow petals*, and *stained stamens*. He proceeds:—"This, to me, has been a very great difficulty, as, where marking has been strictly adhered to, many a fine Tulip has been put aside, because another has been marked in a superior manner; and it has engrossed my attention for years how to divide the properties so that each may have a fair chance.

"It is well known that in many localities stained bottoms and long cups have frequently obtained nearly the whole of the prizes, as the poverty of the exhibitors would not allow them to purchase those of modern introduction. The disqualifying of stained stamens, in some parts of England, is what I cannot approve, as the stains frequently arise from various causes. I have known instances when the stamens have been perfectly clean at opening, and as the mass of colouring has risen, they have become discoloured. This, I have no doubt, arises from a superabundance of colouring matter, as in flowers very clean the stamens are perfectly pure. There is also another point of importance, that is, the base of a bizarre often, as it ages, becomes a greenish-yellow. This is particularly the case with Polyphemus. Now I wish to give all flowers a chance, and I cannot see how this is to be done unless the Tulip is divided into many points. It must not be supposed that I am an admirer of dirty Tulips; far from it—I like purity in every respect; but if accidental or natural causes produce these defects, let every allowance consistent with a due regard for those properties which add so much to the beauties of the flower be made.

"The result of my deliberations has been to divide the properties of the Tulip into twenty-four parts, as follows:—

6 points for form.
6 ,, clean stamens.
6 ,, clean bottom.
6 ,, marking.

"The defects of the Tulip as follows:—

6 points to be deducted for bad form.
6 ,, ,, bad bottom.
6 ,, ,, stained stamens.
6 ,, ,, narrow petals.
6 ,, ,, long cup.
6 ,, ,, cloudy bottom.

"By adhering to these properties, a Tulip having bad cup, bottom, and stained stamens, will, if the petals are not narrow, have eighteen points to gain in marking; but if narrow petals are added to the above, it will, of course, be disqualified altogether. This will be better illustrated by the following details. Suppose a Tulip have good form, pure bottom, and clean stamens, the result will be as follows:—

6 points gained for form.
6 ,, bottom.
6 ,, stamens.

Thus it will have the advantage in eighteen points for the marking out of the twenty-four, which will give it a decided superiority.

"Again, suppose a Tulip have good bottom, clean stamens, long cup, and narrow petals:—

6 points for bottom.	6 points deducted for narrow petals.
6 ,, stamens.	6 ,, long cup.
12	12

This will have twenty-four points to gain in marking.

"Again, suppose a Tulip have good form, but stained bottom and stamens, it will have eighteen points to gain in marking.

"Again, suppose a Tulip have good cup and bottom, and tinged stamens, it will have eighteen points to gain in marking.

"Again, suppose a Tulip have good bottom, long cup, and clean stamens, it will have eighteen points to gain in marking.

"Again, suppose a Tulip have good form and slightly tinged under-stamens, similar to Captain White, *alias* San Joe, this Tulip only showing stains in three petals, it will consequently have fifteen points to gain in marking.

"Again, suppose a Tulip have long cup, bad bottom and stamens, it has no good properties about it; the whole twenty-four points are swallowed up by its defects, and therefore it must be disqualified altogether.

"Again, suppose a Tulip have good form, clean stamens, but cloudy bottom, it will have eighteen points to gain in marking.

"Again, suppose a Tulip have good form, stained stamens, and cloudy bottom, it will have eighteen points to gain in marking.

"There are many Tulips with cloudy bottoms, that is, not a pure white, but similar in colour to what is termed French white. These cannot be classed as pure. Of this class is Gibbons' Lady Flora Hastings, exhibited at Manchester under the name of Sable Monarch.

"I have briefly endeavoured to lay down a standard, and trust that any defects which may be found in it will be charitably reviewed. I do not profess to be *infallible;* but having experienced much difficulty in judging, upon various occasions, I was determined to get to some conclusion as to what number of points each defect in a Tulip ought to have. I know it is a ticklish subject to lay down rules that shall please every one, but I have duly considered the matter for nearly three years, and I now give the result of my deliberations. Upon a careful perusal of them, I think they will be considered as equitable, giving points for certain properties, and that marking in a bad-formed, &c., flower shall not take precedence of one that has three-fourths of the essentials of one."

GLOXINIAS AND GESNERIAS.—These fine plants have been found to flourish in a most striking manner in a compost of the following materials: equal parts of half-rotted beech leaves and good peat soil, with a small portion of mellow turfy-loam, and a good portion of the usual white (or silver) sand; also some well-rotted cow-dung, and a sprinkling of bits of charcoal. A free drainage is always essential, and to have plenty of root-room. They do best placed near the glass, and having warmth at the roots; also to be *shaded* from hot sun, or the leaves will crumple, and have a brown hue. As soon as potted, they should be placed in a hot-bed frame of gentle heat, or in a stove where they can have warmth at the roots. When growth has commenced, they will require proportionate air, to prevent them being drawn up weakly. They require a liberal supply of water and a *damp atmosphere* till the blossoms are nearly opening; then they may be placed near the glass, on a shelf, in the greenhouse, &c.; but avoid watering over the leaves at all times, and, instead, water around the pots, &c., to obtain a *moist atmosphere*.

THE HORTICULTURAL SOCIETY'S SCHEDULE, &c., FOR 1851.—We are informed that a sort of combination has been attempted for the purpose of rebuking practically the Council of the Horticultural Society, for some changes made in the schedule connected with the exhibitions for 1851.

As to the reduction of amount of prizes for any given things, they will expose to the world who shows for honour and who for the sake of money. Although some exhibitors have agreed to abstain from showing, they do not all combine, and the show will not be less in quantity than those of old.

Showing Carnations on their plants is another regulation which some of the exhibitors object to, and we can fully appreciate the reasons alleged for their objections, but the proposal for one and all to abstain has equally failed. One obstinate gentleman thinks a stage of Carnations and Picotees on their plants far more beautiful than blooms in a box, and he intends doing his best. As specimens, the judges will have to look at them as they would if the plants were on their own stage. A man grows them on cards, and he does not cut off and throw away a bloom for a split pod. The presence of a run petal or a split pod does not affect the beauty of a plant, and perhaps most of the pots could be shown with three or four blooms, neatly carded, to set them off to advantage, as they would appear in their own grounds; perhaps with one or two of the blooms in a pot so split as to disqualify a cut flower. But let the Horticultural Society be careful of the judges employed, and be also equally careful how they are instructed, because they must not apply to the blooms on their own plants the rules adopted for showing in a stand or box. We have heard one who fancies he is to be a judge say he will disqualify every collection if he can find a split pod; whereas, to show a stage of them as they should be shown, *all* the flowers should be *retained*. The removal of all those that have split pods would make the plants look meagre and short of flowers, a result which some of the opponents of the new system say is "devoutly to be wished."—G. G.

BLUE-FLOWERED HYDRANGEAS.—My plants are kept in a cold pit frame near the glass during winter, just saved from frost. The last week in February, or first week in March, I proceed to pot them for bloom. The compost I use is what I have grown my Cucumbers in the preceding year, which consists of half the quantity of good loam, a quarter of good spit dung from an old Cucumber or Melon bed, and a quarter of decayed leaves. This mixture I lay in the compost yard for use. The Hydrangeas I bloom in a sixteenth-sized pot; I divest the roots of the old mould. From those plants I intend to produce blue flowers, I cut off the long fibrous roots, reducing the ball to the size of a thirty-two sized pot. I take one ounce of oil of vitriol, and, with a quill or strong feather, I touch the roots of two plants all over. The remaining oil of vitriol I mix with a sufficient quantity of mould to pot two plants. When I have potted them, I place them in a shed or some sheltered situation for three or four weeks, until they have made new roots; then I place them in a forcing-house, and take especial care not to let them droop for want of water. The above method I have practised with success for upwards of twenty years. The flowers are equally as large as those that are pink, and of a fine blue.—*Senex.*

PROPAGATION OF CAPE HEATHS.—In reading over the January Number, I was much satisfied on seeing how to grow this lovely class of plants, and I should be additionally obliged by a few remarks on their propagation, and the Epacris too. Last August I tried to strike some cuttings in a bark-bed, under bell-glasses, but without desired success, having only raised one or two.

I am desirous to know the entire routine as to their increase by cuttings, &c. Will pounded free-stone do to insert them in?—(No.) What is silver-sand, which I see some cultivators recommend?—(The white sharp sand usually sold at the shops.)—*An Admirer.*

POTTING PLANTS.—The season is now approaching when greenhouse plants, &c., commence growth, and require in most cases to be re-potted. If any of the soil looks black and wet, and the pot feels more than usually heavy, there is something wrong. There is a soil which is good for almost every kind of greenhouse plant: loam, with the turf *rotted* in it, decayed cow-dung, leaf-mould, peat-earth, chopped small, or rubbed through a very coarse sieve, and road sand, equal quantities of each; it will do for everything. If Heaths are grown, then treble the quantity of peat-earth, and not alter the others, so that it would be *one* of each of the others and three of peat-earth, instead of one all round.

In moving a plant from one pot to another take care that the plant be not sunk in the least more in the new pot than it was in the old one, and see that the compost, well mixed up, is made to go down nicely all round the ball of roots, &c.—*A Practitioner.*

JASMINUM NUDIFLORUM.—The flowers appear before the leaves. The end of the five-parted corolla is nearly the size of a shilling when fully open. Of a bright yellow colour. It is perfectly hardy; and blooms against a wall, this season, as early as February. In-doors it will bloom all winter, by introducing the plants in succession.

DIALYTRA SPECTABILIS.—This very beautiful Fumaria-like flowering plant, with its large gracefully pendant rosy pink flowers, makes a most charming plant for the bed in a flower-garden. I tried it last summer with perfect success; it ought to be in every one. I had good plants put out the first week in May.—*A Country Curate, Somerset.*

CLOTH OF GOLD ROSE.—In order to induce this very superb rose to bloom more freely and vigorously, it was budded upon a Crimson Boursault, and the result proved highly satisfactory, both in quantity and in size of flowers. The Crimson Boursault may be procured at a small cost, and it may be worked upon the coming season.

HIGHBURY AND NORTH LONDON HORTICULTURAL SOCIETY was established last year (1850), and the number of members now amounts to about two hundred, comprising a great number of the nobility and gentry of the locality; and it is calculated the number will be doubled this season. The Society distributed 225*l.* 19*s.* in prizes, at its two exhibitions, the past summer. Three exhibitions are to be held this year, and to take place the day after the Royal Botanic Regent's Park meetings. It is highly creditable to the Society, and we doubt not but they will have all their expectations more than realized. Why may not the nobility, gentry, florists, &c., of the EASTERN SIDE of London, emulate those of the other quarters of the Metropolis?

IPOMÆA HORSFALLIÆ.—In a recent number, a correspondent solicits instruction how to propagate this splendid blooming hothouse climber. If the following method be practised, success will certainly be realized. The *Ipomæa insignis* is a vigorous grower, and can be purchased at a cheap rate at most of the general nurseries. The *I. Horsfalliæ*, grafted upon stocks of the above, readily take, and progress admirably afterwards. The operation is as follows, and *March* is the best period for its being done. Cut the stock down near to the earth, having the cut left sloping upwards; then cut the piece (scion) to be grafted in the stock, so that the slope is downwards; slit the *stock* a little downwards and the *scion* upwards, fitting the two together by the tongue, and having the bark of each to fit exactly at the sides. This being done, tie securely together, and clay the parts over. After this operation, plunge the pot in a hot-bed frame, bark pit, or similar bottom heat, and cover over with a bell-glass; if several, a hand-glass will answer. Attention to watering will be required, and the graft will soon unite. As it pushes, air must gradually be admitted, till the graft is properly inured. The *I. insignis* strikes freely by cuttings, so that the tops which are cut off, being struck, stocks will be obtained for grafting purposes.—*A Nobleman's Gardener.*

BLOOMING HYACINTHS.—The secret of successfully blooming the Hyacinth is in having the roots in advance of the flower-stem and leaves. Thus, other things being equal, the sooner that bulbs intended for forcing or merely growing in the greenhouse or window in winter and spring are potted in the autumn, and slightly covered and plunged, the better they will succeed. The heat in the ground is, upon an average, higher than the atmospheric, and thus roots are formed plentifully before there is much expansion of leaves; so that there is *no want of nourishment for the flower-stems and leaves* when free growth takes place. The same rule applies to those grown in glasses. It is a general property of roots to court darkness, and shun light. Lately I noticed a great many Hyacinths in rows, in glasses in windows, just beginning to grow, while several were rotting and moulding at their base. This casualty might have been prevented by not allowing the water to touch either the *bulb* or the *roots*, until the *latter* were one-third of an inch in length. The water should be changed, too, every fourth day, and on each occasion two or three bits of charcoal be put into the water of each glass.

Bedding Plants.—All the most showy and long-blooming plants which are the brightest ornaments of our flower-gardens, are now known as the class of BEDDING PLANTS, and many of the nurserymen's catalogües now contain lists of them under that section of flowers. I propose from time to time to give a descriptive account of all the best, with their peculiar treatment, throughout the year.

There is one lovely blooming tribe, viz., the BOUVARDIAS, which, when properly managed, merit a place in every flower-garden, either in patches of three or four plants, or in small beds. I possess the following kinds—B. tryphylla, Jacquinea, glabra, mollissima, splendens, angustifolia, lævigata, venusta, strigulosa, aurantia, bicolor, leiantha, longiflora, and stricta. All these kinds are very handsome flowering plants. The flowers are of a fine scarlet, crimson, red, orange, &c., and in shape like the Trumpet Honeysuckle, of various sizes, and the blossoms are produced in clusters of from six to twenty in each head, and some plants which I have a bed of produced this season thirty-five clusters or heads of flowers upon each. The original species is a native of Mexico, and is usually kept in the greenhouse in this country, but I am of opinion that it and the entire varieties above named may be found as hardy as the old Fuchsia coccinea, and stand our winters in this part of the world. It will, however, be necessary to have them planted where they will have a *very dry subsoil*, and likewise to have *protection in winter over the roots*, by means of leaves, tan, or something of this nature. I purpose trying my beds of plants the next winter, and the result shall be forwarded you. I have grown them in beds and in patches for the last several years, and have ascertained that the plants must be of *two or three years' growth* before they become *bushy enough* to make a show for a bed. Plants calculated to answer the purpose may be obtained of the nurserymen at a reasonable charge. The same plants will successively answer for the length of an age, and in each season increase in size and beauty.

The plan I adopt in the culture of these plants is the following:—The soil of the bed is composed of good rich loam, well manured with rotten leaves, a portion of old hot-bed dung, and charcoal dust, with an addition of river sand. Previous to laying in the compost, I had the bottom of the bed covered to the depth of three inches with some small gravel stones, upon which I had the compost about eight inches deep, the surface being raised above the walk and grass verge four inches. The first week in May I turn out the plants with balls entire, except a careful loosening of the outre fibres. I place them in the bed, the tallest in the centre, and lowest at the outer row, and so close that the plants furnish a covering to the bed, and when in bloom appear a mass of flowers. I place the plant so low in the soil that the top of the ball is about an inch below the surface of the bed. After planting, and before watering, I place from four to six sticks round each, and to them secure the branches; then water freely. The watering is repeated frequently during the summer season, and the plants most amply repay for the attention, nothing exceeding the delicate, splendid appearance of the flowers, which continue from June till November.

The plants grown in the greenhouse attain the height of two feet or upwards, but in the open bed they do not exceed more than eighteen inches (generally about twelve). The plants being allowed to root or spread without obstruction, become bushy, instead of being drawn up weakly. Early in November I take up the plants from the bed, and repot them into the same kind of soil, well draining the pots, and being careful to have fine soil to shake in among the fibrous roots. I have also kept the plants through winter by having them planted in a Mignonette box, closely together. In both instances I keep them in winter in a cool frame, sunk below the surface of the surrounding ground, in which for the last two winters they have kept well. I only give water in winter just to keep the soil moist.

They are readily propagated by cutting the roots into pieces of an inch long, laying them flat on the soil, covering them half an inch, and placing the pot in a hot-bed frame, &c., and they quickly push roots and shoots. A bed of mixed sorts is most interesting.—*An Amateur Florist, St. John's Wood.*

WATERING PLANTS IN POTS.—An excess of water is injurious, and, persevered in, death soon follows. This has especially to be guarded against during winter with the more delicate tribes; but it often happens that the opposite extreme is fallen into, and, as I have seen, during even the present mild winter, in one nursery establishment, vast numbers have perished by drought. It should be borne in mind that immediately the *soil* becomes so dry that the fibrous roots cannot absorb *moisture from it*, the supply of food is cut off, and the plant suffers immediately, and death *soon ensues*. This is especially the case with the Heaths and other similar *fine-rooted* plants. This state of dryness should not be permitted to occur, particularly during the *growing* season. When water, however, is given, always let there be sufficient to moisten all the ball of soil; and do not give another watering till there is reason to suppose nearly all the moisture is absorbed.—*An Old Practitioner.*

OUT-DOOR TREATMENT OF NYMPHÆA CŒRULEA.—During the summer of 1849, my plant, a seedling, was planted in a tub, and placed about ten inches beneath the surface of the water in an uncovered tank. It withstood the severity of the following winter, and made fresh leaves next May. Last year it grew luxuriantly, but did not flower. It lost its leaves from frost last October. I examined it yesterday; the caudex is quite plump and healthy, and I expect it to flower this season. It must be borne in mind, however, that the tank in which it grows occupies a semicircular recess, and is screened from the north, east, and west by a wall twelve feet in height. A terrace walk passes the front of the recess which is open to the south. It will be seen, therefore, that the plant has a favourable situation. In the same tank I have also Limnocharis Humboldtii, Agapanthus umbellatus, Villarsia nymphæoides, Aponogeton distachyon, Calla æthiopica, Mimulus rivularis, Acorus Calamus, and the white and yellow Water Lilies. All these flourish satisfactorily. A thermometer, whose bulb rested on the tub, indicated 38° when ice an inch thick covered the surface. I placed it in the same situation this morning, and it registered 41°. My supply of water is by no means constant, the crown of the plant being sometimes no more than three inches below the surface; but the depth at which such plants should be placed is best regulated by the length of the leaf-stalks. I consider ten inches a very good depth. I should like to try many of our stove aquatics out of doors, more especially Victoria regia. I imagine that they are in reality not half so tender as people expect. An aquatic is not subjected to extreme heats and colds, like a common plant; the temperature of the water being more uniform than that of the air.—*Edward Morse, Albury Park.*

VICTORIA REGIA.—Perhaps it is not sufficiently known that the old specimens of this plant have died out, during the winter, at Kew, Sion, Chatsworth, and other places; and that it, therefore, appears to be little more than an annual. Those who cultivate it should, consequently, secure a succession plant or two, from seed, each autumn.—E. K.

As you despair of seeing the Royal Water Lily cultivated in this country with success, without artificial heat being applied, perhaps you will excuse the liberty I take in offering an ópinion. There are hot springs in various countries; and having seen at Bath, some years since, one in constant use, with a running stream about the temperature of 110° when first issuing from the ground, where would be the difficulty of conveying this water into a tank (of course with a covered roof) of any size that might be required for this noble plant? About twenty miles from the above city are coal mines, which could not be worked without the constant employment of a steam-engine to clear them from the water, which I saw running to waste by the side of the road, smoking hot. Might not this be conveyed into a reservoir for the same purpose? Perhaps the same idea may have engaged the attention of some of your scientific readers, and, if so, will occasion a more profitable dissertation than many subjects of less interest (at least, in the opinion of gardeners) which occupy the attention of the public.—F. (*Gardener's Chronicle*).

POINSETTIA PULCHERRIMA.—In a recent number I observed a strong recommendation of this very showy plant; its large crimson heads forming so ornamental an object. It is not usually grown well, becoming either long and weakly, or if cut in, and side shoots are allowed to grow, the heads of showy bracts are always small. The best mode of treatment is when its bloom is over to cut the plant down to the lowest three buds, and *gradually* withhold water, so as to give it a two months' season of rest in the greenhouse, keeping the soil nearly dry. Then re-pot it, carefully taking away as much of the ball of soil as you can without damaging the roots. Use a compost of year-old turfy-loam, well-decomposed dung, and rough peat, in equal portions. A free drainage of rough materials, and plenty of root-room, are essentials. Then place it in the stove or hot-bed frame, till it has pushed shoots six inches long; then remove it to a cooler, airy situation, so that it prevents its being drawn up. Never stop the leads, and the heads of bloom will be fine. I am a market nurseryman in London; I have the advantage of plenty of stable dung, and therefore make a number of hot-beds. I find this plant succeeds the best when plunged in a bed of this sort. I force it in winter, and have a large number of them in splendid show from January to April. My plants are robust, about two or three feet high.—*Acton.*

CULTURE OF NELUMBIUMS.

BY KEWENSIS.

Having some time back suggested to your readers the experiment of growing tender aquatics in warm-water tanks, and observing that a correspondent has been distributing seeds of Nelumbium luteum, I think a hint on the mode of raising that and the East Indian N. speciosum may not be amiss, as, without such instruction, probably not one person in fifty of those who have received seeds will rear the plant. For some reason or other, probably to preserve a seed which, by sinking in deep water, or being buried in mud, is exposed to many casualties, the seeds of Nelumbium are furnished with an exceedingly hard coat, which as long as it remains uninjured resists all soaking, whether in cold or warm water. In order to induce them to vegetate in any reasonable time, it is necessary to file the blunt end of the seed, until it just yields to the pressure of the nail. Thus prepared, the seed should be thrown into a pan of water, the temperature of which is not above 70°. When first sown it sinks, but in the course of forty-eight hours it will begin to push, and as soon as the seed-leaves have protruded a few inches, the young plant rises to the surface, where its leaves expand, and it floats. In a short time it throws down a runner, much like that of a strawberry, which descends to seek the mud. This runner throws out roots, and sends up a leaf, and from its extremity a similar runner again descends, and again another, each rooting and throwing up its leaf, until at length the plant reaches the mud, when it takes root, and begins to produce strong leaves. The best method is to sow the seed in a pan a foot or eighteen inches deep, having four or five inches of stiff mud at the bottom. It is useless, and probably would be injurious, to cover the seed with earth; those which I tried to plant in this manner invariably came up and floated, and, if effectually buried, the seed would most likely decay. Nelumbium luteum seems to delight nearly in the same treatment as its East Indian relations, and the rich deep velvet green of its leaves form a beautiful contrast to the bluish-white of that species. I have not seen its flower, but understand that it resembles N. speciosum in everything but colour.

Whilst on the subject of aquatics, it may be well to mention that Nymphæa lotus grows very freely from seeds, if they are allowed to seed themselves in the water when ripe, and this is the best way of preserving the species; they come up in the following spring, and flower in the summer. The old roots are very apt to perish. Nelumbium luteum and Nymphæa cœrulea will probably prove the hardiest of all the tender water plants; but collectors must distinguish between the true N. cœrulea, a very strong and luxuriant growing sweet-scented species, and N. stellata, a small, elegant plant, much more tender. I fear, however, that this caution is almost needless, and that N. stellata has disappeared from our collections. The remark may, nevertheless, induce some one who is fortunate enough to possess it to cherish the delicate stranger, and give it the attention which its tropical nature requires. It is a native of Malabar. N. cœrulea is from the Cape of Good Hope.

FLORAL OPERATIONS FOR THE MONTH

ATTENTION is now requisite to see that the proper quantities of plants, seeds, &c., are in due course of preparation for the summer display. Plans of flower-gardens, &c., should be sketched on paper, and the appropriate regulations for future arrangement and plants required be put down; this attention is of much assistance.

IN THE FLOWER GARDEN.

Last month was the best time for grafting shrubs, ornamental kinds of trees, as Thorns, Limes, &c., but any late-growing kinds omitted may still be done, such as Rhododendrons, &c.

Annuals, hardy, such as Clarkia, Nemophila, Larkspur, &c., may still be sown in the open bed. Seeds of *Biennials*, too, should now be sown in beds, such as Hollyhocks, Sweet Williams, Scabious, Canterbury Bells, &c. Also seeds of *Perennials*, as Phloxes, Campanulas, &c. Finish planting out Biennials and Perennials, and dividing large patches of border plants. Hollyhocks must be put in immediately; water them as soon as planted. Newly-budded trees, that is those budded last season, should be looked over, and if any portion of the stock be pushing shoots, they must be rubbed off, so that the entire strength should go to the new shoot engrafted.

AURICULAS.—Give air freely on all suitable occasions, to prevent the flower-stems being drawn up weakly. The blossoms will soon be opening; no water must be allowed to fall upon them, and they must be shaded from hot sun. A stage of shelves enclosed in a wooden frame, or similar provision, having the bottom shelf two feet or so high, and gradually rising, &c., is an erection indispensable to showing them to advantage.

POLYANTHUSES, too, require similar attention to the Auriculas. Neither kinds should be allowed to droop for want of water.

PINKS.—If beds of them are required, make them immediately. A loamy soil, made of turfs a few inches thick, and well rotted, with an equal portion of old decayed cow-dung, is admirably adapted for their growth. It should be nine inches deep, and have a good drainage below. The plants must be removed with as much of the ball of soil as possible, and be planted six inches apart. High raised beds are not beneficial, except in low, wet situations. Autumn-planted beds should be top-dressed with a little rich soil, and the plants be made firm in their places; a few small sticks stuck around amongst the shoots will prevent twisting off.

RANUNCULUSES and ANEMONIES.—When the plants are risen an inch or two high, have the soil pressed closely around them with the hands, stopping up any holes made by worms, &c. A top-dressing, too, of rich compost, free from wire-worm, is very beneficial. Often stir up the soil between the rows. Showers of rain are very beneficial for their growth; if none fall, water with *soft* water in the morning: well-water is injurious. Weak manure-water occasionally poured between the plants contributes to vigour.

TULIPS.—Stir the surface of the bed an inch deep. Protect from *hail*, FROST, and *strong wind*. Keep the soil firm around the stem, and mind that water does not lodge in the heart of the plant where the infant flower is, or it will be damaged; gently open the leaves, to admit the water to drain off.

CARNATIONS and PICOTEES.—If not potted off the end of last month, should be done immediately.

HYACINTHS should be protected from frost, sun, and wind; secure by tying to proper supports. Stir up the surface soil.

PANSIES in beds must have the soil pressed around the plants, and a top-dressing of rich soil an inch or two thick will be beneficial. New beds of them should also be planted. A few sticks among the shoots prevent them being twisted.

CHRYSANTHEMUMS.—Strike cuttings, or pot off rooted suckers. (See articles in our present number.)

ROSES.—Now plant out the tender China and Tea, or Bourbons, &c.

IN THE FORCING FRAME.

Balsams, Cockscombs, Globe Amaranthuses, &c., that require potting off, or repotting, should be duly attended to; also Thunbergias, Browallias, Lobelias, Brachycoma, &c. Seedling Fuchsias, Verbenas, Petunias, &c., should be potted off singly. Dahlias, too, should be placed so as not to be drawn up weakly. Achimenes must be potted off singly. (See articles on culture in previous numbers.) Tender Annuals, as Stocks, Zinnias, &c., should be placed in a cool frame or pit, to prevent them being drawn up weakly. Where it is practicable to prick out, such as Stocks, Asters, &c., upon beds, and protect with frames, it should be done; it gives a robust growth to them. Cuttings of Fuchsias, Petunias, Verbenas, and many other greenhouse plants, should now be put off. Young plants of Fuchsias, now procured, if six inches high, will make fine ones for shows in summer.

IN THE GREENHOUSE, &c.

Admit all the air possible. Re-pot Lobelias, Tigridias, Geraniums, Verbenas, and other similar plants for beds. All other kinds of plants requiring re-potting should now be done (see Compost, &c., in last month's Calendar). Such as are straggling, &c., should be cut in, to render them bushy. *Pelargoniums* will require particular attention in tying up, watering, and fumigating (if green fly be perceived); occasionally give a little manure-water. (See articles on culture in previous volume.) Camellias—when done blooming, examine the roots, and if necessary re-pot (see articles upon, for soil, &c.); then place them in a warm part of the greenhouse or forcing-house, giving due attention to watering, &c., till the wood is firm and flower-buds are set; they may then be removed to a cool pit, so as to be gradually hardened by more air, &c. Japan Lilies flourish best in peat soil and sand. Cinerarias require particular attention; pot or re-pot young seedlings, and fumigate if green fly appear.

A careful inspection of the greenhouse plants should be made, to see which require re-potting, and do it at once, not waiting till some general performance; always attend to it when it is wanted. Such Azaleas as have done blooming must directly be re-potted, and their growth afresh be gently promoted in a higher temperature for a short time. Any required to bloom late should be kept in a cool situation at present.

ERICAS.—Any requiring re-potting should be done directly; avoid too large pots with the less vigorous growers, but free growers will require room to extend in proportion. Give air freely, but avoid draughts, especially from east and north. Calceolarias require re-potting to have a vigorous bloom.

CULTURE OF FUCHSIA SERRATTIFOLIA.

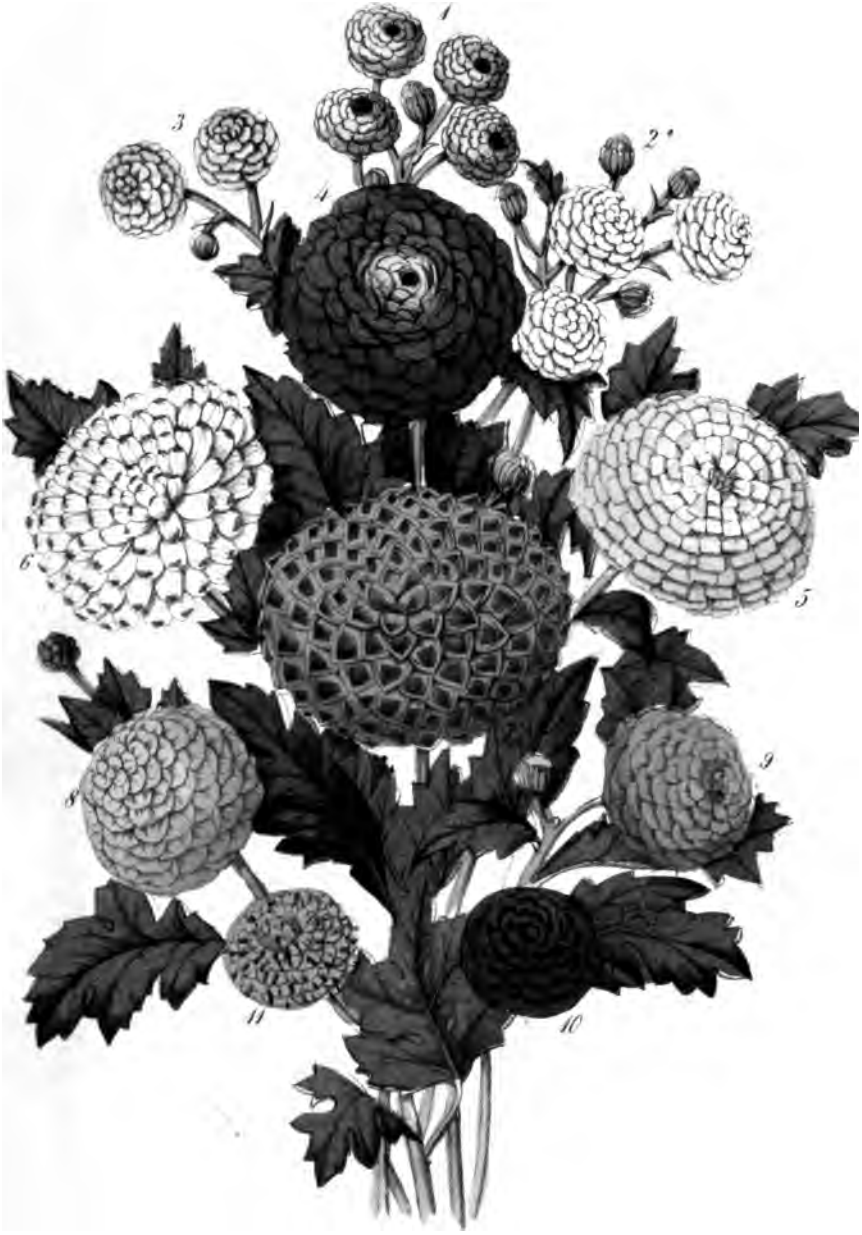
BY MR. H. STILWELL, GARDENER, FROGMORE, NEAR ST. ALBANS.

I HAVE read and heard many complaints of this *charming Fuchsia* being a shy bloomer. I do not find it so under my own management, and I therefore forward the particulars of the treatment pursued.

In August I strike my cuttings, and in doing so I place them in a cool pit, with a glass over them. When they are rooted, I pot them into 60-sized pots, in the following compost: three parts good mellow fibry-loam, one part of leaf-mould, and one part of good sand, having them well mixed together. I have a good drainage, which I find to be very essential with this Fuchsia, it being a stronger grower than most other kinds.

I have plants of this Fuchsia from nine inches to six feet high, and some of them bloomed from December to February, and others are now in bloom, some of their flowers only six inches from the pot. I bloom them in 16-sized pots. Why they are complained of and termed shy bloomers is, in my opinion, for want of proper pot-room and a suitable compost.

When *bushy* plants are desired, I take off the heads, which induces the production of lateral shoots, and they bloom in summer along with the other kinds.



New Minima Chrysanthemums.

FLORICULTURAL CABINET

MAY, 1851.

ILLUSTRATIONS.

CHRYSANTHEMUM INDICUM MINIMUM.

Dwarf Chinese Varieties.—1. Cameleon. 2. Bouton d'Argent. 3. Piccinino. 4. Gil Blas. 5. Anais. 6. La Gitani. 7. Elisa. 8. Madame Lemichez. 9. Cybele. 10. Roi de Lilliput. 11. Croustignac.

LAST year, in our Number for May, we had the pleasure to give figures of seven handsome varieties of this very interesting section of Chrysanthemums. We have now the gratification to give figures of eleven new ones, which are of great beauty when in full bloom, and merit a place in every collection of this charming tribe of autumnal flowers.

We are indebted to the perseverance of the florists of France and Belgium for these lovely additions. The Horticultural Society introduced the Chusan Daisy Chrysanthemum into this country four years back; and the continental florists having obtained it, commenced to impregnate its blossoms by other kinds; and as it produces seed liberally, they succeeded even beyond expectation in raising a numerous race of this Minima section: the varieties we now figure are what are offered to the public for the first time this season. M. Miellez, nurseryman, of Esquermes, favoured us with the figures, and he now has plants for sale. These varieties, as well as what we previously possessed, merit a place in every greenhouse, frame, or sitting-room. They are dwarf compact growers, and in bloom are particularly neat and pretty. The plants require to be promoted in growth as much as possible in spring, in order to have a profuse bloom.

NOTES ON NEW OR RARE PLANTS.

Acacia urophylla. Pointed-leaved.—A native of the Swan River colony. At Kew it forms a moderate-sized shrub, and blooms in the greenhouse from January to March. The leaves are broad, sharp-pointed, two inches long. The flowers are produced at the axils of the leaves, from three to five at each, of a pale yellow colour. The Acacias flourish and bloom best when grown in equal parts of light loam and peat. (Figured in *Bot. Mag.*, 4573.)

Bouvardia leiantha.—Introduced from Guatemala. It is a robust-growing plant, which rises three feet high, branching. Each leaf is nearly four inches long by two broad. The flowers are borne in terminous cymous heads, of twenty to thirty blossoms in each. Flowers tube-formed, an inch long, of a rich deep vermilion colour. It is a valuable acquisition to this charming tribe of plants.

Campanula Vidalii.—A native of the Azores, which was discovered growing upon an insulated rock on the east coast of Flores by Captain Vidal. It is a *half-shrubby* plant, growing two feet high, and very bushy. The flowers are produced in terminal racemes; the blossoms are nodding, bell-shaped; each blossom is an inch long, and nearly as much across the mouth, of yellowish white or cream colour. It is a very ornamental species, blooming freely throughout the summer. It is a half-hardy plant, flourishing in the open border during summer, or cultivated in pots in the greenhouse.

Chysis aurea, var. Maculata.—The Golden-flowered spotted variety. This beautiful Columbian orchideæ has recently bloomed in the establishment of Messrs. Lucombe and Pince, of the Exotic Nursery, Exeter. The sepals and petals are white and yellow at the lower half, and the upper of a rich brown-red. The middle lobe of the yellow lip is prettily spotted with purple. Each flower is about two inches across. (Figured in *Bot. Mag.*, 4576.)

Franciscea confertiflora.—A vigorous-growing shrub, leaves five inches long and two broad. The flowers are borne in terminal cymous heads, several blossoms in each. A flower is two inches across, lilac coloured. It is an ornamental species, figured in *Gardeners' Magazine of Botany*. The Francisceas thrive best in equal parts of turfy-peat, loam, and leaf-mould, with a liberal mixture of sand and bits of charcoal. When in a growing state, occasionally give manure-water. To keep them bushy they require to be cut in every year. (Figured in *Bot. Mag.*)

Hebeclinium ianthinum.—A soft-wooded half-shrubby plant, from Mexico. It is of the Eupatoria order. The plant blooms freely when grown in a pot, and rises about a foot high. At Kew it has been kept in the stove; but Mr. Smith supposes it will flourish in the open ground during the summer season. The flowers are produced in large corymbous heads, purple, and the long styles are also purple. Each blossom is about an inch across. (Figured in *Bot. Mag.*, 4574.)

Hemiandra pungens.—A dwarfish shrubby plant, from the Swan River colony. It forms a pretty shrub in the greenhouse. The flowers are produced in long spikes. Each blossom three-quarters of an inch across the mouth, and the tube about the same. Of a pinky-lilac, spotted with numerous red dots. A neat pretty plant. (Figured in *Bot. Mag.*)

Pentstemon Clousii.—Scarlet outside and pure white inside, fine flower, blooming profusely.

Pentstemon gentianoides Salterii.—Tube white, edged with bright pink, and pencilled with carmine; very pretty.

Pentstemon ovatus.—A beautiful sky blue; blooms in profusion; very handsome.

Potentilla grandis.—The flower is of a clear rich yellow colour, larger than a half-crown. The plant is a strong grower and free bloomer. With us it grows two and a-half feet high, quite hardy.

Potentilla Antwerpensis.—Of medium growth, flowers semi-double, of a rich orange colour.

Potentilla bicolor grandiflora.—A strong grower. Flowers yellow, with a red-tinged margin.

Potentilla Smouthii.—A golden yellow, beautifully veined with crimson.

Potentilla Plantii.—A rich scarlet, with a yellow centre, large flower; very handsome.

Potentilla Bainsii.—Bright crimson, with a lemon spot in the middle of each petal; very fine.

Potentilla incomparable (Plant's).—A very rich deep crimson, large flower, and most superb.

The above Potentillas and Pentstemons are admirable plants for bedding, or in patches in borders. They merit a place in every flower garden.

Rogiera cordata.—A neat stove shrub, which forms a bush four feet high. A native of Guatemala. The leaves are as large as those of the Ixora coccinea. The flowers are borne in large cymous heads, five inches across, very similar in appearance to those of an Ixora. The tube of each flower is half an inch long, and a quarter of an inch across the top, of a pretty delicate rose colour. The plant blooms freely, and is very ornamental when in profuse bloom. It is in the London nurseries. (Figured in *Bot. Mag.*)

Salvia pseudo coccinea.—An old but beautiful flowering Sage. The flowers are borne in long spikes, tube nearly an inch long, of a rich deep scarlet colour. It blooms profusely in the autumn and winter. (Figured in *Paxton's Flower Garden.*)

Vanda tricolor.—This very beautiful Orchideæ is a native of Java, and was first introduced into this country by Messrs. Veitch. Sepals and petals yellow ground, with numerous very distinct spots of red; lip rose colour. Each blossom is two inches across. It is exceedingly handsome, and deserves to be in every stove collection. (Figured in *Paxton's Flower Garden.*)

Wigandia Caraccasana.—A soft-wooded plant from Caraccas, requiring to be in the stove. It is of the Hydroleæ order of plants. The flowers are borne in large panicles, or terminal compound racemes. Each blossom is an inch across, short tube, and five-parted mouth, of a pale violet colour. (Figured in *Bot. Mag.*, 4575.)

PLANTS IN BLOOM IN THE ROYAL GARDENS OF KEW.

In the Stove.

GESNERA HERBERTII.—Many in profuse bloom, having spikes of flowers two feet long; the large fine scarlet blossoms, beautifully spotted inside with dark crimson, had a splendid appearance; as also some fine specimens of Achimenes picta.

PHLEBODIUM AUREUM.—An Æschynanthus-like plant, blooming freely. The flowers are produced in heads of eight to ten in each, an inch and a-half long, of a rich deep scarlet colour. Very handsome.

BIGNONIA SPECIOSA.—A climber, blooming profusely; each blossom is near five inches long, and four across the mouth; tubular portion nearly white outside; inside lilac, with deep rosy streaks. Very pretty.

HIBISCUS ROSA-SINENSIS.—Double scarlet and buff; both very handsome.

ARDISIAS.—Still beautifully adorned with a profusion of rich red berries.

VICTORIA REGINÆ.—The young plants are flourishing admirably, and one was this day in bloom.

SALVIA GESNERIFLORA.—This very showy species, with its large rich scarlet flowers, is now one of the finest ornaments of the greenhouse. It deserves to be in every one.

There is also a fine collection of New Holland plants in bloom, generally what are termed of the *Pea-flowered* class. Nearly all are neat-growing-shrubs, profuse bloomers, and have handsome flowers; all are especially interesting and ornamental, highly meriting a place in every greenhouse.

The following were in beautiful bloom:—

CHOROZEMA VARIUM.—Flowers a deep orange yellow, and the keel a rich blood crimson. The contrast is very striking, and renders it one of the best.

CHOROZEMA CORDATA.—Neat yellow, with a rosy-red keel, neat and pretty. There is a variety of this, whose flowers are a bright orange-scarlet, with a rosy-purple keel.

CHOROZEMA HENCHMANNIA.—Rosy-red, yellow eye, with a deeper-coloured keel.

PODYLOBIUM TRILOBATUM.—Neat three-lobed leaves, flowers yellow, with a deep-red keel, three-quarters of an inch across. Very pretty.

PULTENÆA RETUSA.—Bright yellow, six to eight blossoms in each terminal head. The foliage is small and pretty.

PULTENÆA THYMIFOLIA.—Pretty small foliage, dwarf and bushy; flowers golden yellow, with the back side of the petals a dark maroon; blooms in profusion.

PODOLOBIUM STAUROPHYLLUM.—Holly-like leaves, flowers of a rich deep yellow, with a red keel, near an inch across. Showy.

Eutaxia myrtifolia.—Neat lance-shaped foliage, flowers yellow, with red eye and keel; blooms profusely. Pretty.

Bossiæa linophylla.—Pretty narrow leaves; flowers bright yellow, with red eye; profuse bloomer. Very showy and neat.

Platylobium formosum.—Bright yellow inside, red outside, nearly an inch across. Pretty.

Pultenæa polygalifolia.—Bright yellow, half an inch across; neat small foliage. Very pretty.

Bossiæa cordifolia.—Pale yellow, with a dark keel, and neat small heart-shaped leaves. Very pretty.

Goodia pubescens.—Bright yellow, with a dark eye and neat small foliage; blooms very profusely.

Gastrolobium spinosum.—A deep orange-yellow, with a dark crimson keel. Very pretty.

The above Pea-formed flowering plants are neat and shrubby, and very distinct from each other. They bloom very freely, and for a long period; also can be procured at a trifling cost.

Zichia tricolor.—A neat twining plant, covering a wire-frame four feet high, and most profusely in bloom. Its numerous large heads of flowers, orange, scarlet, and yellow colours in each blossom, have a beautiful effect.

Boronia denticulata.—Flowers a pale lilac and purple shade, half an inch across, pretty; as was B. **primata**, with its pretty pink flowers; and B. **microphylla**, with its flowers, white inside and pink outside; its small neat foliage added to its beauty. Each flower nearly an inch across.

Westringia erimecola.—The flower is somewhat of the shape of a Schizanthus pinnatus, an inch across, white, tinged with lavender, borne in profusion; the leaves are small. It is a neat shrubby plant.

Struthiola stricta.—Neat plant, small foliage, flowers white, in spikes, and every shoot has a spike of them. Pretty.

Templetonia glauca.—Each flower an inch and a-half long, pea-shaped, a deep red.

Zuria lanceolata.—Leaves small, three-lobed, and the shrub is very neat and compact in growth; four feet high. The flowers are about the size of the Plum blossoms, white, and produced in such profusion that the plant is covered with them. Very neat and pretty.

Phyllanthus calycinus.—A neat shrub, with small oval leaves. Each blossom, six petals, half an inch across, greenish white. Singular and neat; blooms profusely.

Prostranthera rotundifolia.—Each flower is in form like a small Gloxinia, nearly an inch long, of a pretty lilac, borne in profusion, and foliage small. A neat pretty blooming shrub. P. **violacea**, too, was in bloom; the flowers less, and not so pretty as the former.

Linum flavum.—Its bright yellow flowers, an inch across, produced in profusion on dwarf plants, are very pretty.

Beaufortia decussata.—A neat plant, small foliage, and its fine crimson thread tasselled-like flowers have a fine appearance.

Tropæolum tricolorum.—A large plant, in fine bloom. Truly admirable.

Euphorbia Jacquiniflora.—This is one of the loveliest blooming stove plants. Its profusion of (spikes) rich orange-scarlet flowers, each the size of a fourpenny piece, are truly beautiful. It ought to be in every stove.

In addition to the Ericas we noticed in the March Number, the following are the best now in bloom, viz.,—

Erica cerinthoides major.—Flowers in terminal heads, tube an inch and a-half long, a rich scarlet. Very handsome; ought to be in every collection.

E. M'Nabbiana.—Tube bellying, an inch and a-half long, rosy-red upon a light ground, with a white tip. Very handsome. Dwarf grower and free bloomer.

E. grandinosa.—Very small pure white flowers, borne in vast profusion, covering the plant with a white mantle of little pearls. Very pretty.

E. sulphurea.—Tube an inch long, hairy, sulphur tinged with green. Very neat.

E. persoluta alba.—Flowers very small, white, with black anthers, which have a very pretty contrast, and render the plant most interesting; it is covered with bloom.

E. delecta.—Flowers erect, short tube, which is about half an inch across the top; they are produced four or five together in a cluster; a French lilac colour, with a darker centre. Very neat.

E. intermedia.—Tube one inch, borne in long spikes around the shoots, drooping, white. Delicately pretty.

E. Sindryaca.—Bell-shaped, half an inch long, purple below, and the rest flesh colour, in profusion. Very pretty.

E. cistifolia.—Small flowers, white, with black anthers. Very pretty; ought to be in every collection.

E. Beaumontiana.—Bell-shaped, smallish size, flesh colour. Pretty.

E. Linnæoides superba.—Tube one inch, purple below, and the rest white, in profusion. Neat and pretty.

E. odorata.—Bell-shaped, half an inch long, white, fragrant. Pretty.

Muraltia stipulacea (formerly a Polygala).—The flowers are small, produced around the stems in long spikes, of a bright violet colour. Very pretty.

Brachysema latifolia.—A large plant, twined round a circular wire frame five feet high, in most profuse bloom. The large pea-like, deep crimson and red flowers have a fine appearance. It is highly ornamental as a greenhouse twining plant at this period of the year.

Hardenbergia macrophylla.—This pretty twining plant, with its profusion of pea-shaped light-blue flowers, were very pretty in the greenhouse.

Gloxinia Baron de Voire.—Tube white, having five ridges, of a pale blue colour. The mouth white, edged with light blue. Very pretty, and worth being in every collection.

Indigofera rosea.—Its profusion of smallish pea-like flowers in terminal spikes have a very pretty appearance, and render it worthy a place in the greenhouse.

Acacias.—A considerable number of beautiful kinds were in bloom; but we must omit their description at present, as well as the list of hardy herbaceous plants now in bloom. In our next they will appear.

Cinerarias.—There are numbers in the greenhouse of the very best kinds, highly ornamental, diffusing, with the Acacias, a delightful perfume.

ON THE CULTIVATION OF VIOLA PALLIDA PLENA, OR NEAPOLITAN VIOLET.

BY MR. GEORGE FRY, GARDENER TO MRS. DENT, MANOR HOUSE, LEE IN KENT.

This truly beautiful little fragrant plant being an especial favourite of mine, and having been *very successful* in its cultivation, I now forward a few remarks relative to the management pursued, not, however, presuming I can throw any *new light* upon the subject, my object being merely to give a few practical hints at a seasonable period, which I trust may be useful to some of your numerous readers, more particularly those young tyros who are desirous of acquiring a knowledge of the best means of cultivating some of Nature's choicest treasures.

Propagation.—This is readily performed during the spring months after the blooming season is past. The precise period being regulated according to the condition of the plants, and the season they are required to produce their flowers. Plants intended to bloom early in autumn should be increased early in spring, say the latter end of March or beginning of April; and those not so required may be propagated any time from the latter end of April to the early part of May.

As soon as the plants have ceased to bloom, by a little encouragement they will produce numerous lateral shoots, which will readily emit roots if taken off and be somewhat thickly inserted in a compost composed of light maiden loam and thoroughly decomposed leaf mould, with a good portion of silver or river sand well blended together, and pressed firm. They should be watered with a fine rose watering pot, and covered with the portable tops of hand glasses. They must be shaded too from the intense rays of the sun and kept close, removing only to dry up superfluous moisture, and to give an occasional sprinkling should they at any time appear dry.

After Treatment.—When upon examination the plants are found to be well rooted, preparation should be made for planting them out in a bed on a border rather shaded than otherwise, but not entirely excluded from the sun's influence. If the natural soil be not sufficiently good, some of the previously mentioned compost should be forked into it, well mixed, made firm and even. The plants should be carefully taken up, and be planted from six to eight inches asunder, after which give a copious watering, and shade them for a few days until they have made fresh roots. As the season advances it is only necessary to stir the soil between them, checking the growth of all intruders, and in dry weather liberally supplying them with water; they should by no means lack *this feeding* and life invigorating element, or they will not realize the anticipations of the manipulator. I am fully satisfied that blindness of flowers is generally the result of *this want* of attention, to say nothing of the red spider, green fly, &c.

Final Treatment.—About the latter end of August, or the beginning of September, those intended for early autumn flowering should be transplanted to their final quarters, and in preparing to do so it is indispensably necessary that they should be placed far beyond the evil of stagnant or local moisture, as the Violet, although delighting in warm refreshing showers, and liberal waterings when required, is very impatient of an excess of humidity continually about them. To avoid this state of things, select a situation that has the advantage of being warm, dry, and airy. The beds should be raised to an elevation of two or three feet; these should be constructed of old dry hot-bed linings, or half decayed leaves, or both thrown up together to the desired height. Upon this stratum place the frame, or frames, and at the same time see that the sashes are in the best possible condition. Having proceeded thus far prepare for planting in the following compost, viz., four parts of well decomposed turfy loam from an old pasture, one part of two or three year old cow manure, one part of thoroughly decayed leaves, one part of coarse sand or road grit, with two of well pulverized rich yellow loam; these should be mixed " at the time of using," so that the whole may be well incorporated. The coarsest of this should be put in first, then the other on the top of it to the depth of eight to ten inches. Take up the plants with roots entire, and plant them eight inches apart every way, pressing the soil firmly about them; when completed thoroughly water the whole with soft water, as rain, river, or which has been exposed to the atmosphere for a few days; hard water is very injurious to the plants. Shade and keep them close for a short time, to allow the plants to get a little established, after which let them have plenty of air by fully exposing them in favourable weather. As the autumnal sun, in a great measure, withdraws his genial influence, ventilation may be gradually diminished, more particularly when they commence yielding their odoriferous flowers, which will cause the stems to become proportionately long, and render the flowers more conveniently suitable for the *bouquet.*.

The temperature I endeavour to maintain ranges from forty-five to fifty degrees, consequently—

> *When chill November's surly blast*
> *Makes trees and forests bare,*

I put a good lining of fresh unfermented leaves, three or four feet thick, and as high as the tops of the frames. Securing the whole by fixing hurdles all round them, these throw a steady warmth into the beds, which lasts for a long time, assisted by a good covering of mats in frosty weather.

If they are required to embellish and perfume the drawing-room or conservatory, it is necessary only to plant them in well-drained pots instead of planting them out, and plunge the pots up to the rim in the beds in coal-ashes, from which they can be removed when in full bloom. In the application of water it is an essential point to do it judiciously, do it thoroughly too when it is done, repudiate the dribbling system; very few waterings will be necessary during the dark months of autumn and winter, they should be kept in that satisfactory medium state neither too wet or too dry.

During fine warm genial showers the lights may be taken off for a few hours, and if attention be paid to this it will be found much better than artificial watering. By pursuing the above mode of cultivating this, "the Queen of Violets," I have gathered them three inches in circumference, and of the richest possible *azure-blue*. Nothing, in my opinion, can afford so grateful a perfume in the depth of hoary winter as a nice bouquet of these charming flowers.

HINTS ON THE CULTURE, AND A SELECT LIST OF ROSES FOR EXHIBITION.

BY MR. GEORGE COMPTON, GARDENER TO WILLIAM SIMPSON, ESQ., STAMFORD-HILL, NEAR LONDON.

To those inexperienced in the cultivation of Standard Roses, the following treatment, as pursued by me, may be acceptable. During the flowering season, if convenient, I make choice of my plants, as it enables me better to judge of their respective habits and distinctness of colour. By the latter part of October I prepare for planting, by procuring some good adhesive loam, adding to it about one-third leaf mould, the whole is well mixed; in this compost, with me, they have thrived remarkably well.

I plant early in November, that the plants may be somewhat established in the soil before severe weather commences. Immediately on planting a strong stake is fixed to each plant, to which they are tied; if not done the wind may afterwards injure the plant, by deranging the action of the newly-formed roots. During spring I occasionally water them with liquid manure, applying it in proportion to the strength of the plant; in fact they require to be liberally supplied during the first season of their growth. I do not prune them till the month of April, but the second and succeeding years I prune them severally in the months of January, February, and March; for instance, the Hybrid, China, Bourbon, and Noisettes, in the month of January, those of moderate growth to two or three eyes. In February the Hybrid Bourbons and Damask Perpetuals; and the more tender varieties, as the Tea-scented and China, in the month of March. The vigorous growing kinds, when treated as Pillar or Climbing Roses, require but little pruning, as Brennus and others of similar habit. At the period of the flower-bud beginning to swell it is liable to be deformed or destroyed by the green fly. As soon as any appear I adopt the following method of destruction. To one gallon of boiling rain-water I steep one pound of tobacco, and in two gallons of soft warm water four pounds of soft soap is dissolved, beating it into lather; I then mix the whole in seven gallons of cold rain water; I then with a hand-syringe freely sprinkle each tree with the solution, making choice of a dry day for the operation, as it enables me to destroy them more effectually. I afterwards cleanse them by syringing with clear cold water. By adopting the above practice I have successfully competed at the Horticultural Exhibitions in this neighbourhood.

The following is a select list of those varieties I have exhibited, and which I recommend for the above purpose:—

For Single Blooms.

French Gallica :—
- Boula de Nanteuil.
- Gloire de Colmar.
- Kean.
- Shakespeare.

Bourbon :—
- Captain Sisolet.
- Coupe d'Hebe.
- Great Western.
- Henri Barbet.

Hybrid China :—
- Brennus.
- Duke of Devonshire.
- Triomphe d'Angers.
- William Jesse.
- Duke of Sussex.

For Trusses.

Hybrid Perpetual :—
- Geantides Batailles.
- Baronne Prevost.
- Duchess of Sutherland.
- Madame Laffay.
- La Reine.

Bengal Roses :—
- Mrs. Bosanquet.
- Carmin de Yebles.

Hybrid China :—
- Triomphe de Laquene.

Noisette :—
- Jaune Desprez.
- Solfaterre.

Belgic Rose :—
- Etoil de la Malmaison.

The French Gallica Roses are splendid varieties to exhibit for single blooms, but they require superior cultivation to bring them to perfection. The flowers are remarkable for their rich and brilliant varied hues. The Hybrid Noisettes are indispensable on account of the large trusses they produce.

THE CROCUS.

BY ORION.

The improvement which has been going on so rapid of late years in what are termed "Florists' flowers" has also been going on slowly, though surely, in the more humble class of flowers, in which the Crocus, "the sweet harbinger of spring," takes its rank. For the numerous fine varieties our gardens are now adorned with we are indebted to the Dutch, whose soil is so much more suitable for most bulbs than our own; and it is to be feared that though much has been done by them, yet this flower does not present sufficient attractions to render it a worthy subject for the English hybridizer. Within the last few years, however, there has appeared a new race, with large and bold formed flowers, which ere long will drive out the pale and irregular formed straggling things we have so long been satisfied to grow as Crocuses. As the past flowering season has been of unexampled duration, a few notes of the best varieties may perhaps induce some of your readers to improve their hitherto small and little varied collection.

Little has yet been done with the yellow varieties, a bed without a portion of the golden hue presents rather a monotonous appearance; there has been nothing introduced to rival the "Golden Yellow," the "Cloth of Gold," beautiful as it is, blooms too early to contribute an effect of variety. The following have been proved worthy of a place in any garden, however small, and will succeed as well as the more common varieties:—

Orondates, fine large bright purple.
Ne Plus Ultra, blue with a light border.
Deville, large white, richly veined with plum.
Caroline, a beautiful pure white without stain.
Mont Blanc, also a good white.
Prince Albert, a large deep bright purple.
Favourite, a rich dark blue.
Washington, bright violet-purple.
Passe-tout, light purple.
Queen Victoria, a very fine large white.
La Majesteuse, a noble light flower, richly striped and veined plum.
Regina, cream-white.
Bride, pearl-white.
Calypso, light purple.
Blucher, violet-purple.
Vesta, white veined lilac.

BRIEF REMARKS.

HORTICULTURAL SOCIETY, 21, REGENT STREET, *April* 1, 1851.—Messrs. Veitch sent a plant in a pot, and a cut specimen, from a bush growing in the open border of the Darwin Berberry (Berberis Darwinii), a new small-leaved evergreen shrub, from Patagonia. This proves to be a species whose importance it is almost impossible to overrate, inasmuch as it is exceedingly handsome, perfectly hardy, and naturally produces its rich orange blossoms in great profusion during the early months of the year. Indeed for general value we have nothing at present at all to be compared with this fine Berberry. A large Silver Medal was awarded it. The same nurserymen also furnished a bloom of the pretty light-coloured striped Camellia, named Countess of Orkney.—Messrs. Hayes, of Lower Edmonton, communicated two nicely managed plants of tree Violets, for which a Certificate of Merit was awarded.—Messrs. Standish and Noble produced a beautiful new Carnation-striped Azalea, named vittata, from China, which promises to be an acquisition. It is quite distinct from any of the striped kinds, and very early. A Knightian Medal was awarded it. The same nurserymen likewise contributed a flowering plant of Viburnum macrocephalum, raised from a cutting struck last autumn, and Limonea laureola (Skimmia japonica), a sweet-scented shrub from the mountains of India, and said to be hardy about Kingsbridge, in Devonshire. It was stated that its natural character is to produce fruit of brilliant scarlet in autumn. A Certificate of Merit was awarded it. —From Messrs. Henderson, of Pine Apple-place, came Hebeclinium ianthinum, a promising greenhouse plant with Ageratum-like flowers, which were reported to last long in perfection; and a charming collection of Hyacinths, of which the following are the names of some of the best:—*Light blue*: Orondates, Robinson, Nimrod, Grand Vidette, Grand Lilac, and Passe tout (double). *Dark blue:* Laurens Koster (double), Prince van Sax Weimar, Emicus, Baron van Thuyll, Prince Oscar, and Mignonaude Dryfhout (double). *Violet*: Tubal Cain, William I. and Prince Albert, the latter is very dark. *White:* Helen, Grand Vainqueur, Grand Vidette, La Candeur, and A la mode Epuisée, double white, with a pink centre. *Blush:* Grandeur de Meneilles, Anna Maria (double), Triumph Blandina (ditto), and Tubiflora. *Plum:* L'Unique, a variety much prized for its colour, which is new to Hyacinths. *Yellow or buff:* Anna Paulowna, Heroine (double). *Deep rose:* Amphion. *Red:* Herstelde Vreede, Diebitsch Sabalskansky, Appeluis, Le Francq de Berkhey, and Waterloo (double). *Light red:* La Dame du Laack, and Lord Wellington. The same nurserymen also sent examples of Narcissi, among which the best were Nannette, yellow, and Radiator, white with a yellow centre. A Certificate of Merit was awarded for the Hebeclinium, and a Banksian Medal for the Hyacinths.—Mr. E. G. Henderson, of the Wellington-road Nursery, St. John's Wood, sent an Ixora, two seedling Rhododendrons, a crimson and a light kind; and a well grown plant of Dielytra spectabilis, for which a Banksian Medal was awarded.—The same Fumewort, evidently grown in less heat, and more highly coloured, was exhibited by Mr. Clark, nurseryman, Brixton-hill; but by far the finest specimen of this Dielytra was produced by Mr. Edmonds, gardener to the Duke of Devonshire at Chiswick House. The latter was, however, unfortunately disqualified from receiving any prize on account of its arriving too late, it being especially required that all subjects of exhibition shall be in the room two clear hours before the time of meeting. The same thing happened in regard to a Java Rhododendron from Messrs. Rollisson, which also came too late to fall under the consideration of the judges.—From Messrs. Lane, of Great Berkhampstead, came a single white seedling Camellia, a specimen of the sweet Trichopil (Trichopilia suavis), and four large boxes of cut Roses, fresh and beautiful as just gathered from their Rose house. They consisted of *Hybrid Perpetual:* Baronne Hallez, crimson; Baronne Prevost, blush, large and beautiful; Caroline de Sausal, blush; Chateaubriand, delicate pink; Comte de Montalivet, rosy crimson; Cornet, bright pink; Dr. Arnal, deep crimson; Duchesse de Gallieria, shaded pink; Duchesse de Praslin, blush, with pink centre; Duchess of Sutherland, glossy blush; Edward Jesse, lilac crimson; General Cavaignac, rosy pink; Géant des Batailles, vermilion; General Negrier, rosy blush; George Lecamus, rosy blush; La Belle Amerique, shaded pink; Lady Alice Peel, rosy crimson; Louise Aimée, pink, light edge; Louis Buonaparte, bright rose; Madame Guillot, rosy crimson; Madame Laffay, crimson; Madame Trudeaux, brilliant carmine; Marquise Boccella, pale pink; Miss Pepin, delicate pink; Mrs. Elliot, crimson; Polybe, rosy purple; Princess Beljioso, rose; Queen, brilliant rose; Regulata, pink; Reine des Fleurs, pink; Reine Mathilde, light pink; Robin Hood, lilac rosy pink; Sidonie, bright pink; Standard of Marengo, crimson lake;

William Jesse, crimson, tinged with lilac; Comte Robrinsky, beautiful crimson. *Bourbon:* Armosa, rosy blush; Augustine Marget, delicate bright rose; Bernardin de St. Pierre, brilliant carmine; Dupetit Thouars, rich carmine; Emilie Courtier, bright reddish crimson; Le Grenadier, bright lake; Madame Angelina, salmon yellow; Queen, delicate salmon; Speciosa, shaded rose. *China:* Abbe Mioland, fine crimson red; Fabvier, striped crimson; Miellez, lemon white; Mrs. Bosanquet, creamy white. *Tea:* Belle Allemande, cream, shaded blush; Comte de Paris, cream; Devoniensis, creamy white, buff centre; Goubault, salmon-shaded rose; Madame Bravy, creamy white, salmon centre; Niphetos, pale lemon; Smith's Yellow, pale straw; Vicomtesse de Cazes, golden yellow. *Noisette:* A fleur Variable, rosy salmon; Cloth of Gold, yellow; Jeanne d'Arc, lemon white; Mrs. Siddons, fine yellow. A Banksian Medal was awarded for the Roses.—Mrs. Lawrence exhibited a fine specimen of Enkianthus reticulatus, two species of Boronia, the beautiful violet-blossomed Mirbelia floribunda, Phaius Wallichii, Maxillaria Harrisonii, an Oncidium resembling sarcodes, and a new and very curious Epidendrum, bearing a long, drooping, green flower, which terminated in a broad rich orange-coloured fleshy lip, vieing in brilliancy with the E. vitellinum itself. It was stated that it would probably produce flowers in clusters, and if so it must be considered a great acquisition. A Knightian Medal was awarded for this, and a Banksian Medal for the other plants.—Messrs. Loddiges sent a handsome pale rose-coloured Rhododendron, raised from Nepaul seeds; and Mr. Myatt, of Deptford, showed two nicely-flowered Cyclamens.—From the Garden of the Society came the fine specimen of Epidendrum aurantiacum, which was exhibited at a previous meeting, Maxillaria Harrisoniæ, Angelonia moschata, Cyrtoceras reflexum, the purple Gesnera, Boronia tetrandra, Eriostemon cuspidatum, three varieties of Epacris, two species of Cytisus, Franciscea Hopeana, Forsythia viridissima (again produced in excellent condition), the Gesnera-flowered Sage, Salvia gesneriflora.

A GARDEN OF BULBS.—How universally everybody, even persons comparatively indifferent to gardens, admire the flowers of all bulbous-rooted plants; yet how few gardens among those in the highest keeping make them form anything like a conspicuous feature in the general arrangement. How this happens I know not, because from February to July, aye even to September, there may be kept up a continual succession of the most neat and lovely, as well as the most gorgeous bloom, according to the taste of the gardener; not that I would recommend an entire reliance on bulbs, for there are many perennials of quite another class that would wonderfully aid the general effect, and they might be so contrived as to supply those colours which may be most efficient at particular seasons. I am an advocate for bulbs upon the same principle that I am for perennials, apart from their great beauty; that is, for the little trouble they give one. For the most part they need only be disturbed once in three years, and then only because the increase is so great that they want thinning, so also does a perennial; indeed so do most perennials, for they spread their roots in three years into large patches, and require to be parted, or they of an inch thick), and, per pound, is the cheapest description of glass manufactured, being sufficiently strong to resist any hailstorm. — *Northumbrian.*

MIGNONETTE.—As the common Mignonette has ever been an especial favourite on account of its sweetness, perhaps the following method of inducing it to assume the character of a bush may not be uninteresting :—Not later than the beginning of April, sow a few seeds in deep pots, filled with rich sandy loam ; place them in a melon-frame where there is a good moist heat ; when they have made about four leaves, pick out all but one strong plant in each pot ; as they grow, pinch off all side shoots, taking care to leave a leaf at the bottom of each. When the plants have attained the height of twelve inches they will show their blossoms. The latter must be nipped off, and at the same time the plants will require tying up to thin sticks with matting ; leave them about a week longer in the melon-frame, taking care to pinch off all side shoots ; then remove the plants to the greenhouse, where they will have less water and plenty of air. In a short time they will again begin to put out the top shoots ; but only one on each must be retained, which must be led up the sticks, and all side shoots again pinched off. By this time the plants will be about eight inches high ; the bloom must be again cut off, and the plants still kept in the greenhouse. In the autumn they will put out plenty of shoots from the top, and will form handsome bushes, which will come into flower in the following March. By cutting off the flowers occasionally for bouquets in the spring they will send forth fresh shoots, and will continue to flower all the summer.—*Gardeners' Chronicle.*

THE CHRYSANTHEMUM A SPRING FLOWER.—On April 12th some flowers were sent to the Horticultural Society's meeting, and the person who forwarded them remarks in the *Gardeners' Chronicle* that they were treated as follows :—" Towards the end of the plants flowering (last season), and when they began to throw up their new wood, instead of turning them out into a cold frame, I quietly put them into the stove, and there kept them up to the present time. Two plants were only tried, but both succeeded. There is a peculiar look of hard dry health about them, not easily described, but which is not seen in plants bloomed in our damp autumns. There is not a dead leaf from top to bottom ; and fresh bud blossoms and blooming wood are being thrown up daily, as if the plant never would leave off. It always seemed odd to me that the Chrysanthemum should be ten months, more or less, preparing to flower."—*Micklewell.*

CHINESE PRIMROSES.—Sow seed, in heat, as early as possible ; pot the plants off as soon as large enough ; repot when required ; and such plants will answer your wishes by blooming from August to the following spring.

PIMELEA DECUSSATA.—(*To H., Cornwall.*)—When the new shoots are about half ripened, cut them off close under a joint, at about an inch and a-half long ; dress off the lower half of the leaves, and insert them deep in silver sand ; cover with a bell or small hand-glass. Plunge them to the rim in some material in a striking-house, if you have one. They do not at that period of summer require any bottom heat. If no striking-house, an exhausted hot-bed will do equally well. The usual attention to keep the sand barely moist, to dry the inside of the glass once a-day, and shade from hot sun, being given, you will find them strike root readily. The Ipomœa you mention we do not know. We will inquire about it, and you shall hear from us again.

FANCY PELARGONIUMS (*A. H.*)—The disease you complain about is one that these high-bred varieties are very subject to. It is called *spot*, and sometimes *gangrene*, and originates from various causes, such as unsuitable soil, a stagnant or humid and cold atmosphere, injudicious watering, and the use of impure and highly enriched soils; sudden changes of any kind will also induce it; and some varieties are constitutionally subject to it. When it presents itself in its most malignant form it is almost impossible to eradicate it or stay its progress; but if the plants are attended to directly it shows, it may be cured. In addition to the marks or spots upon the leaves, the plants will show brown marks upon the stem and foot-stalks of the leaves, and be exceedingly brittle, and present a glossy, nay almost a glassy, appearance upon the surface of the leaves. This is its worst form, and the remedy to be taken is to shake the plants out of the soil, wash the roots if necessary, and repot in fresh turfy loam and leaf-mould, liberally intermixed with sand, and charcoal in small pieces. Place the plants in a warm and airy place, and water with great caution, until they get into good growth. Large plants, after they get into free growth, cannot so safely be shaken out; therefore remove as much soil as you can with safety, and repot into the same compost, not forgetting the charcoal, as it is to its universally purifying influence that you must mainly look for success. When the plants are first affected, if taken in time, an occasional watering with lime-water and free ventilation will check the progress of disease; but it is almost impossible to eradicate it when fairly established. It is more than probable that the high breeding, or breeding "in and in," as is the case in the animal kingdom, has tended much to induce the disease, for it is quite certain nearly the same effects proceed from the same causes in the vegetable as in the animal creation; and so long as raisers of Pelargoniums continue to breed from the most delicate kinds, so long will this disease, which under such circumstances is constitutional, continue to increase. High breeding and high feeding among plants produce disease in the end; and if we are to "deserve success," more attention must be paid to the selection of parents, more especially the female parent. A short time ago we had plants of Field Marshal and Salamander much affected: they were potted and introduced into a temperature of 45 to 60 degrees, in which they have grown some inches in length, and are now quite healthy. The same experiment we intend to try with some other kinds.—*Magazine of Botany.*

GLOBE AMARANTHUS.—These very beautiful flowering plants deserve a place in every greenhouse or stove, and are most lovely summer ornaments, amply repaying for every attention given. When the plants are two inches high, pot off singly into small pots, in a loamy soil and well-rotted leaf-mould equal parts. Plunge them in a hot-bed frame. When nicely rooted at the sides, repot into larger, till they are in the pots to bloom in, such as nine to twelve inches across. At each repotting use a more rich compost by adding well-rotted manure, bits of charcoal, and a *free* drainage. I have had plants two and a-half feet high from the pot, and as much across, spangled over beauteously with their lovely flowers.—*A Nobleman's Flower Gardener.*

MOSS ON LAWNS.—Many complaints have been made relative to the destruction of the grass by an accumulation of moss. To be saved from this annoyance, always begin to mow early in the spring; that is, as soon as there is anything for the scythe to cut. Attention to this throughout a season will destroy the moss. When the mowing is deferred in spring, the moss destroys the *fine* grass by covering it, and only the strong coarse grass will survive. Where the moss now prevails, rake it up by means of a wood-rake; after raking, sweep with a stiff besom, and mow as soon as required. I once destroyed the moss on a large lawn by applying a liberal sprinkling of fine-sifted quicklime, first in November, and again early in March.—*A Long Observer.*

PIMELEA DECUSSATA.—I observe in the April Number a correspondent asks for information relative to the *propagation* of this plant. The following account of a method recommended by Mr. Fish, a clever gardener, with the Pimelea family will, perhaps, be of some use to the inquirer; I, therefore, forward it:—

"*By Cuttings.*—If any shoots have missed having flower-heads at their points, these points will proceed to grow as the flower-buds commence to expand. In other instances, sometimes young shoots will protrude from behind the flower-heads. In either case an opportunity is afforded for obtaining a few early cuttings in March and April, the advantage of which is that the plants will be struck, potted off, and established in their pots before winter. When these young shoots are from one to two and a-half inches in length, and getting just a little firm at the base, is the best time for taking them off, and inserting them in the cutting-pots. When cuttings cannot be got by either of these means, we must *wait* until the beauty of the flowers is gone, then cut them all neatly off, give any little pruning that is necessary to regulate shape and outline, as the two-year-old wood will generally break freely enough, and then wait until young shoots are formed, when as many may be thinned out as will be requisite for cuttings. Cuttings from older wood will strike; but then they require much longer time, are not so certain, and after all seldom give such healthy free-growing plants. In preparing the cutting-pots, let them be three-fourths filled with drainage, or place a smaller pot topsy-turvy inside of a larger one, and fill the space between to a similar height with drainage, then strew a little green moss to keep the drainage clear, over that some lumpy fibry peat, over that finer sandy peat, and over all from a quarter to half an inch of pure sand. If below this sand, or even blended with it, unless at the very surface, there is a little fine-pounded clean charcoal, but not mere duust, that being separated by a very fine sieve, the cuttings will strike all the sooner, and be less liable to damp off. The pots should be well watered, and allowed to drain before inserting the cuttings, the making of which consists in removing a few of the lower leaves, and cutting clean across with a sharp knife, and then the small holes made by the dibber should be filled with sand, and all gently settled with fresh watering, and the cuttings and surface sand allowed to get dry before the conical-headed bell-glasses are firmly fixed over them. They may then be placed in a close frame or pit, about eighteen inches from the sashes, in April, and two feet in May; and in such a position they will require little shading, and but little watering, until they are struck. As soon as that has taken place the plants must be elevated nearer the glass, the bell-glass removed by degrees, taking it off first at night, then mornings and afternoons, and ultimately altogether. In the case of cuttings struck with so little soil to feed on, and in the case of all plants raised by seed, the sooner they are pricked off the fewer will be the casualties, and the better will they thrive.

"*By Inarching and Grafting.*—The first is seldom practised, owing to its inconvenience; the second is often resorted to as the means of procuring a good-sized plant much more quickly than from seeds or cuttings. It is of importance to have stocks of free-growing kinds, such as *decussata* and *dupracea*. These should be from two to three years old from seedling or cutting. All that is necessary is to have the stock a *little* in *advance* of the scion, and then, provided you can make the inner bark of both unite, it matters little what mode be adopted, though side and slit grafting will generally be the neatest and quickest done. A few twigs may be left on the stock to draw up the sap until the scion has fairly taken. A close frame or pit will be desirable; and if a little steam from sweet dung and leaves, the union will take place all the sooner, from the excitement and moisture. April is the best time. Air must be given afterwards gradually, and the scion allowed to monopolize the whole strength of the stock. This mode is most applicable for all the low, slow-growing kinds, as thus additional vigour is imparted to them."

The following are the best sorts, and well suited for the greenhouse. In order to keep the plants bushy, they require cutting in as soon as done blooming; and if done early in the summer, the new shoots are well ripened before winter. All flourish in a compost of fibrous sandy peat, and about one quarter of turfy loam, a year old, with a sprinkling of bits of charcoal, and a liberal drainage; compost broken, not sifted:—

P. rosea.—Flowers a pretty rosy-red. A neat bushy plant, the nicest size for the greenhouse; is about half a yard to two feet high; at that height this and all the other kinds are readily kept.

P. rosea Hendersonii.—The habit of this plant is similar to the other; but the colour of the flowers is much brighter and more showy.

P. intermedia.—A neat plant, with light-pink flowers. Blooms freely.

P. hispida.—Flowers vary in colour, from white, blush, to pink. It is a neat-growing-plant; blooms freely.

P. spectabilis.—Flowers flesh colour, tinged with a deeper, in large heads, showy. It blooms freely; and valuable, too, as a winter bloomer.

P. diosmæfolia.—Flowers rose coloured; blooms freely. It is a neat shrub.

P. macrocephala.—Flowers light-flesh colour, in large heads. The plant is more robust than any of the others.

P. decussata.—Flowers rosy-red, showy. The plant is of neat growth, and a free bloomer.

THE NATIONAL FLORICULTURAL SOCIETY.—This new Society held its first meeting for the exhibition of SEEDLING FLORISTS' FLOWERS at the Rooms, 21, Regent-street, London, on Thursday, the 3rd of April. The attendance was good. The rooms were ornamented with a fine display of Cinerarias and other plants. The following seedlings were considered by the censors as worthy of notice:—

Messrs. Henderson, of Pine-Apple-place, sent a truly fine collection of the best kinds of Hyacinths, all legibly named; also a collection of Epacris, amongst which was that fine variety named Epacris hyacinthiflora candidissima; also a nice selection of new Narcissus tazetta, better known as the Polyanthus Narcissus. There were also small collections of Polyanthuses, Gloxinias, &c.

These plants, in full bloom, and generally well grown, were very creditable to the different exhibitors. The grand object of the meeting was the seedlings. In Cinerarias the numbers were considerable; we wish we could say the merit of them was equally so. Very few were placed by the censors.

Mr. Ayres sent a seedling of great merit, named Orpheus; form first-rate, habit good, petals of good substance, colour a deep rosy-lilac, disc rather small. This obtained, and deservedly, a Certificate.

Mr. Smith, of Tollington Nursery, sent also a seedling, pure white with a blue disk, size medium, form good, petals well shaped, but rather thin. A Certificate was given to it.

Mr. E. G. Henderson, with several others, sent one named Loveliness; white ground, reddish-purple tip, dark disc. This variety has first-rate properties; but some of the petals of part of the blooms was defective. The censors wished it to be exhibited again, and only passed a favourable opinion upon it. The same gentleman sent another desirable variety, named Christabelle, which was not sufficiently expanded, but promises to be a good variety. This also was desired by the censors to be sent again when in better condition.

Mr. Bragg, of Slough, sent a pan of Pansies.

Mr. Turner, of Slough, sent a pan of Pansies, and some Auriculas well bloomed.

Mr. Rogers, of Uttoxeter, sent two seedling Cinerarias, which, when better grown, the censors thought would be desirable varieties. They were, Field Marshal, white ground, delicately tipped with sky blue, good form and substance; and the other, Lady of the Lake. This was a well-formed flower, of good substance, ground colour white, with pale rose tips. The censors desired these two also to be sent again.

Mr. Turner sent some seedling Pansies, one named National, creamy-white ground, purple margin, fine yellow eye, good form, but rather rough at the edges, probably owing to the cold wet season. The censors desired this to be sent again.

Mr. E. G. Henderson obtained a Certificate for a seedling Rhododendron. Trusses large, flowers well shaped, bluish white, the top petal richly dotted with dark crimson spots. It was named R. superbissimum album.

Messrs. Standish and Noble sent an Azalea Indica, named Vittata, the merits of which were novelty in colour, being of a creamy white with purple stripes.

The above were all the seedlings the censors thought worthy of notice: and this is as it ought to be; unless seedling flowers are decidedly *superior* to the *older varieties*, it is an imposition upon the public to send them out as new and improved varieties. The censors at this meeting were determined not to notice any *inferior varieties merely because they were new;* and this principle, we hope, will be carried out to the fullest extent.

Messrs. Veitch, of Exeter, sent a fine cut sample of their Fuchsia spectabilis; also a cut specimen of Rhododendron jasminiflora; a tolerable seedling Camellia, named Storeyii, its fault being having the petals too much pointed.

Upon the whole this is a good beginning of the Society, and we trust it will act up to its professed principles, and thus become a vehicle for proclaiming to the public *really good* seedling flowers.

The second meeting of the Society was held on April 24th. Cinerarias, Auriculas, Pansies, and Rhododendrons were the principal flowers shown. Certificates of Merit were awarded by the censors to the following:—

A Pelargonium, named Chieftain, exhibited by Mr. Hoyle, of Reading.

A fancy Pelargonium, named Formosissimum, by Mr. Ayres, of Blackheath.

A Cineraria, Alba magna, by Mr. Smith, of Hornsey-road.

An Auricula, Beauty of Bath, by Mr. Griffin, of Weston-road, Bath.

A Cineraria, Margaret d'Anjou, by Mr. E. G. Henderson, Wellington-road, St. John's Wood.

The following kinds were commended by the censors:—

A Cineraria, Model of Perfection, by Mr. Ayres, of Blackheath.

A Pelargonium, First of May, by Mr. Turner, of Slough.

A Cineraria, Beauty, by Mr. Ivery, of Peckham.

The next meeting will be held on May 8th.

PANSIES.—The usual mode of showing these blossoms has lately been much objected to. The process of pressing a flower flat to the surface of the stand has misled parties, who formed a favourable opinion of certain flowers by what they saw of the specimens so shown; and when the flowers were seen growing, instead of the even-face quality, they were wavy and crumpled. Now it would be much preferable to exhibit the plants in certain fixed-sized pots, and each plant to have three or four blossoms. This method would place all exhibitors upon an equality, and the flowers be seen in their real character. There would be but little trouble to convey a dozen pots to a meeting; and I am certain that there are not more than twelve varieties which approach any thing near to perfection in form that have hitherto been brought to the exhibitions in and around London.—*Pensée.*

FLORAL OPERATIONS FOR THE MONTH

MAY—the cheerful "merrie" month of May—once again unfolds her flowery mantle. Our beds and borders are now bespangled o'er with the varied and beautiful tints of opening flowers. The pits and greenhouses offer the garden their winter-stored subjects, already bursting into active growth, and eager to breathe the free and open air. Some caution and care must, however, still be exercised; the return of occasional sharp frost may come, it will be advisable to be prepared with some protecting material to shelter, in case of need, such plants as are most susceptible of injury. If not already decided upon, determine at once all your plans; pay particular attention to the arrangement of colours. A flower-garden may be richly furnished with plants, but be very ineffective if the colours are badly arranged. For producing brilliant effect in masses, reject parti-coloured flowers; such are never effective. Use pure and decided colours, such as brilliant scarlet, pure white, deep purple, bright yellow, &c.; those which are in close affinity kill each other. Take care not to mix plants which are of doubtful duration when in bloom with those of a more permanent character, remembering always that the beauty of a formal flower-garden depends upon its being in all its details a perfect work of art, in which no blemish should occur. There must be high keeping, symmetry, judicious arrangement of colours (traceable to fixed principles), or it will not form a satisfactory whole. Young gardeners should attend to this. Many persons plant their stock so thinly, that their beds are not covered till late in the season; we advise *thick planting* for speedy effect.

Where annuals are required for late flowering, they may yet be sown; and hardy annuals that have come up too numerously should be thinned out, so as to retain but enough to be vigorous. Tender annuals, raised in pots or frames, should be taken, with as much soil to the roots as possible, and after the middle of the month be carefully planted out. After all planting is done, the next operations will be training and pegging down the plants; this is a tedious but most important process towards having well-furnished beds. Climbing plants will now require training from time to time, according to their growth.

FLORISTS' FLOWERS.—Amongst these we may class the *Antirrhinum;* many of the kinds now in cultivation are exceedingly pretty, and deserve to be grown. Now is the best period to plant them out. *Auriculas.*—The blooming season of these favourites is now nearly over, and their growth commencing; they should therefore be immediately repotted, so that they may receive the benefit of additional stimulant, and thus more vigorous and much stronger plants will be obtained than if the potting is deferred until autumn. *Carnations* and *Picotees* are by this time in their blooming pots; and as they advance in growth, attention will be necessary to stick and tie them up neatly. Stir up the surface soil of the pots, and add a dressing of mixed loam and well-decayed dung. *Cinerarias.*—As these go out of bloom cut down the stems, which will induce an abundance of shoots for increase, and turn them out into the open ground where they are partially shaded. *Dahlias.*—The third week in the month is as early as it is safe to commence planting out. The young plants will be greatly strengthened by repotting them into larger pots, giving all the favourable air possible, in order to have them hardy when turned out. *Fuchsias.*—Repot and trim all the plants required for specimens; encourage their growth by frequently syringing them over-head, and take care immediately to stop such shoots as are of too redundant growth, so as to preserve the plant uniform. *Pansies.*—Cuttings put in last month, as directed, may now be planted in a shady bed, for summer blooming. Copious watering in dry weather will be necessary. Such as are grown in pots, for show, require particular attention, and by thinning out the side shoots much finer blooms may be had. In the seed-bed any promising varieties should have a little dung placed around them, and watered occasionally, to promote their growth. *Pelargoniums.*—Such as have not been stopped back will now be coming into bloom. Keep them free from the green fly by fumigating, washing them afterwards. *Pinks.*—As the blooming stems advance they will require thinning out. Such as are not generally inclined to burst their pods may have all the stems but one removed. The more robust and very double kinds should have two or three stems left, according to the strength of the plant. *Ranunculuses.*—If dry weather sets in water must be liberally supplied; apply it between the roots and not over the foliage, and use rain-water if possible, prefering evening for the operation. *Tulips.*—The top cloth should at once be got on, to protect from storms of heavy rain and hail, and never let the sun reach the flowers after they show colour, but give all the air possible.

IN THE FORCING FRAME.

Continue to strike cuttings of stove and greenhouse plants, and pot off such as are struck. Plants intended to be flowering specimens for the greenhouse, such as Achimenes, Gloxinias, Gesnerias, &c., should be grown here and brought forward as rapidly as practicable. What are termed greenhouse annuals, as Balsams, Cockscombs, Salpiglossis, Rhodanthe, &c., Thunbergias, &c., should be got on quickly. A strong stimulating soil, copious waterings, and ample pot room, together with bottom heat, are inseparable necessaries to their successful cultivation.

IN THE GREENHOUSE, &c.

A free ventilation is of importance, and by closing with a humid atmosphere early in the evening a vigorous growth will be best promoted. Give liberal shifts to such plants as now require it before the roots become matted; much injury is often done by deferring until a general shifting. Camellias, such as have formed their flower-buds, should be placed in a sheltered and shady situation out of doors. Ericas should have the ends of their shoots pinched off, to render them bushy and spreading. Climbing plants should be neatly tied as they advance in growth, and abundance of flowers will be the result. Shrubby plants of weak growth, and which naturally make *long frail shoots*, are much improved by bending down the branches, and fixing them to a wire attached to the rim of the pot; in this manner the nakedness of the plant at its base is hidden, and the check imposed on the ascent of sap will induce an increased supply of shoots.

. *Pelargoniums.*—Never allow the plants to flag, or the bottom leaves will turn yellow, and the plants then become naked. Put cow, horse, and sheep dung in equal parts, with a sprinkling of quick lime into a tub, and to one peck of these add five gallons of rain or other soft water. When taking it for use draw it off clear, and give the plants a watering twice a-week. Give air freely, shut up early, and syringe the plants overhead three times a week till the flowers expand. Now strike cuttings of the scarlet class of Pelargoniums, as Compactum, Gem, Queen, Royal Dwarf, &c., and when rooted pot off, which by the autumn will fill their pots with roots, and being what is termed pot-bound, they will bloom during the winter season.

Calceolarias.—Keep the lower side shoots pegged down; it will induce roots to push up the stems. Fumigate occasionally to keep down the green fly.

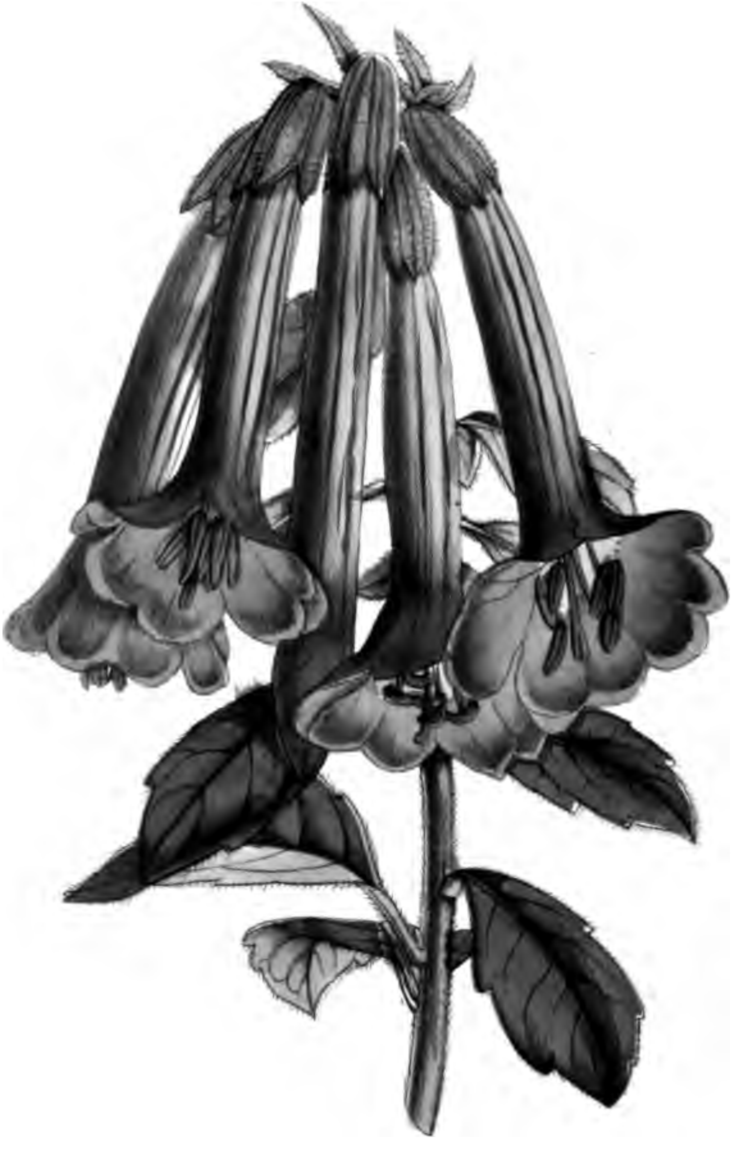
Azaleas.—When done blooming the growth must be promoted, see Articles upon culture.

WATERING.—At this season increasing attention is requisite; care must be taken that the *entire ball* of soil is made moist, particularly with the plants grown in sandy peat or sandy loam; a few holes made by means of an iron pin down through the ball will admit water into its interior.

WEIGELIA ROSEA.

BY A. Z.

LAST spring I had a fine specimen of this new shrub growing in a small bed on my lawn; and in consequence of its becoming too large, I had the branches shortened one-half their length: the result was the production of a profusion of new shoots. I thinned away a portion, leaving a due supply to furnish the plant; and the effect of this cutting in, &c., was, the plant bloomed in a much superior manner to what it had ever done previously. This spring I pruned in what other plants I had; and now they are pushing admirably vigorous, and I doubt not will bloom superior to what they have hitherto done. Cut them in, as is done to the Rose, every spring, and improvement will ensue.



Cantua dependens.

FLORICULTURAL CABINET

JUNE, 1851.

ILLUSTRATIONS.

CANTUA DEPENDENS.

THIS most beautiful flowering hardy greenhouse shrub is a native of the Peruvian mountains, plants of which we received from Mr. Van Houtte. It forms a neat branching shrub, growing very freely in a compost of equal parts of sandy-peat, leaf-mould, and good loam. It appears to grow so readily that it is likely to flourish well during summer in the open border, similar to the Fuchsia. Messrs. Veitch have had it stand out of doors for two winters, with a slight protection. They exhibited a beautiful flowering specimen at the Horticultural Society's exhibition on the 3rd of May. We need not say much to recommend to our readers this very elegant flowering plant; it ought to be in every greenhouse and flower-garden. The Indians adorn their chambers on feast-days with these pre-eminently beautiful blossoms, and give the plant the name of MAGIC TREE.

NOTES ON NEW OR RARE PLANTS.

ACACIA DIFFUSA.—This species is somewhat of a trailing habit, but with attention easily forms a bush. The leaves are about an inch long, very narrow; the flowers are in large balls, of a bright yellow colour, and it blooms profusely IN WINTER.

ACACIA OXYCEDRUS.—The leaves are narrow, about an inch long; the flowers are borne in spikes, of a rich yellow colour, and bloom in winter.

ACACIA RICEANA.—A plant of this handsome species is now in the large conservatory of the Horticultural Society, and is eight yards high, but we have seen small bushes of it, about three to four feet high, in profuse bloom. The leaves are narrow, about an inch long; the flowers are round, of a pretty pale yellow.

APONOGETE DISTACHYON.—This is a handsome, sweet-scented water plant, a native of the Cape of Good Hope. It flourishes in our own country as a hardy plant. Some blooming specimens have been forwarded by the Rev. Charles Osmond, of Loddiswell, near Kingsbridge, in Devonshire. In a pond at that place the plants thrive most luxuriantly, producing thousands of most deliciously fragrant flowers throughout the summer, and even in January there were three hundred fine blossoms. The appearance of the plant is much like the POND-WEED (Potamogeton natans). Mr. Osmond states, " About three years since a root was given me the size of a shot, which I planted in a small pan, and sunk it in the pond; it grew rapidly, and in a few months produced flowers, and, unobserved by me, seed also, from which have sprung up to the surface of the water hundreds of plants. The spring which supplies the pond is peculiarly clear, always running, and in the severest winter rarely freezes.

AZALEA VITTATA. THE RIBBON-FLOWERED.—White, with Carnation-like stripes. A plant was exhibited at the Horticultural Society's Show by Messrs. Standish and Noble.

BERBERIS DARWINNI.—A very handsome evergreen, hardy, shrubby Barberry, with thick leathery (somewhat holly-like) small leaves. The flowers are borne in profusion in long spikes; the racemes are drooping, each having eight to ten blossoms, of a bright orange colour, and a single flower is the size of a small pea. The bush grows three to four feet high, and when in bloom is literally covered with flowers, and highly ornamental. Mr. Lobb found it in South America, and sent it to Messrs. Veitch, of Exeter. It deserves to be in every shrubbery. (Figured in *Gardeners' Mag. of Bot.*)

BERBERIS PALLIDA.—This very pretty evergreen species is too tender to succeed in the open air in our own country, except in the warmer parts of Devonshire, &c.; it, however, does well in the greenhouse, potted in a compost of equal parts of sandy-loam and leaf-mould, to which is added a portion of bone-dust. The leaves are somewhat holly-like, and the flowers of a pale yellow colour, which are succeeded by large panicles of deep purple berries. A fine species for the greenhouse, or probably would succeed trained against a south-aspected wall, with a slight protection in the severest winter weather.

DAPHNE PURPUREA.—This pretty hardy shrub was recommended to us, the leaves being of a dark purple, excepting the young ones at the ends of the shoots. We obtained it from Belgium, and recommend it to our readers. The old Mezereum blossoms before the leaves appear, but this kind blooms after the leaves are expanded.

DOMBEYA MOLLIS (Syn. Astrapæa mollis).—In the palm stove at the Royal Gardens of Kew, it has reached the height of a tree thirty feet high, with a branching head. The small flowers are produced in terminal umbels of a pretty rose colour, having the scent of the Hawthorn. (Figured in *Bot. Mag.*, 4578.)

ESCALLONIA MACRANTHA.—This beautiful robust evergreen shrub deserves a place in every warm shrub border. Its fine foliage (large as Arbutus leaves), and large rosy-pink flowers, render it a valuable acquisition.

HELIOTROPIUM IMMORTALITE DE LOUISE MARIE.—This very peculiar variety was raised from seed by M. Marchot, of Leige, named as above that wherever it was cultivated it might recal the great loss which Belgium has lately sustained in the death of her queen. It blooms more profusely than any other Heliotropium. The leaves are small, roundish, and the plant somewhat of a drooping habit, similar to those which the Romans placed on the graves of their dead. The cymous heads of flowers are large, and each blossom green at the centre, *emblematical of hope*, surrounded by a crown of gold, *emblem of holiness;* and the five rays of the border present the virginal whiteness of the celestial stars, with this peculiarity, that here the flowers, it is stated, have the peculiar fragrance of the Violet and Wallflower during the period of their progressive changes.

HELLEBORUS ATRO-RUBENS.—A very handsome purple-flowered hardy herbaceous plant, blooming in February and March. The flowers are about the size of our Christmas Rose Hellebore. The dark purple gradually changes to green. It inhabits woods and bushy places in the mountains of Austria. It is now in the Royal Gardens of Kew. (Figured in *Bot. Mag.*, 4581.)

HOLBOLLIA ACUMINATA.—A stout climbing evergreen shrubby plant, growing in the mountain woods of Nepaul, so strong that the trunk becomes four or five inches in diameter. The leaves are about the size and shape of those of the Mandevillia suaveolens. The flowers are produced in racemous clusters of six to eight in each, from the axils of the leaves. A single flower is bell-shaped, about half an inch long and as much across, of a purplish colour, with green tips. They have the perfume of the Orange-tree flower. It has hitherto been treated in this country as a greenhouse plant, and highly merits a place there, but it is very probably quite hardy. (Figured in *Paxton's Flower Garden.*)

MONARDA AMPLEXICAULIS.—A hardy herbaceous plant, growing two feet high. It blooms freely, the flowers being produced in terminal heads, and are white tinged with rose, each flower having four rows of purple spots on the lip. It is a very pretty plant, recently introduced into our nurseries from Belgium.

MORMODES ATRO-PURPUREA. BLACK-PURPLE FLOWERED.—A stove orchid, from Panama, and has bloomed in the collection of these plants belonging to J. D. Llewelyn, Esq., at Penllergare, in Wales. The flower-scape grows a foot high, and the flowers are pendulous, each being two inches across, of a dark chocolate blood colour. A very singular, pretty species. (Figured in *Bot. Mag.*, 4577.)

PERSEA GRATISSIMA. ALLIGATOR PEAR.—It is a moderate-sized tree, extensively cultivated in the West Indies, especially in Jamaica. Plants are in our own country, but we have not heard of its having ever bloomed here, except at the Royal Gardens of Kew and Syon Gardens, but it has never fruited, we believe, in Great Britain. The flowers are green, each about half an inch across. The fruit is pear-shaped, yellow and brown, often tinged with deep purple; each fruit about four inches long. Its taste somewhat resembles butter or marrow, hence it is there called " Vegetable-marrow." It is so rich and mild that most people make use of some spice or pungent substance, to give it poignancy; and wine, sugar, lime-juice, but mostly pepper and salt, are used. If the stone of the seed be taken, and with it write upon a white wall, the letters will turn as red as blood, and never go out till the wall is whitewashed again, and even then with difficulty can it be effaced by that process. (Figured in *Bot. Mag.*, 4580.)

POLYGONUM VACCINIFOLIUM. CRANBERRY-LEAVED.—A rock-plant, from the Northern India mountains. It is quite hardy in our own country. The Horticultural Society introduced it here, and in the garden at Chiswick. It blooms during the latter part of summer and autumn. The stem is *shrubby*, and each branch terminates with a spike, three inches long, of rose-coloured flowers. It is a prostrate-growing plant; the spikes only rise about four to six inches high. It is a pretty rock plant. (Figured in *Gardeners' Mag. of Bot.*)

RHODODENDRON CINNAMOMEUM CUNNINGHAMII.—This splendid variety was raised by Mr. Cunningham, nurseryman, of Liverpool. It is a cross between a white-flowered variety of R. maximum and R. cinnamomeum. It is quite hardy. The heads of flowers are large, and each individual blossom is two inches across, white, beautifully spotted on the upper segments with purple. It is a charming addition to this noble family of shrubs, and ought to be in every collection. (Figured in *Gardeners' Mag. of Bot.*)

RONDELETIA VERSICOLOR.—Mr. Seeman sent this handsome flowering plant from Central America to the Royal Gardens of Kew. It is a stove plant, bearing numerous cymes of its dense flowers, which are remarkable for the play of colours. The tube is yellow; the limb (end of flower), in bud, deep rose, changing, when they expand, to a pale rose, and then to white, with a yellow centre, and having a two-lobed green spot in the middle, from the green stigmas, which protrude beyond the mouth. It is a moderate-sized shrub, blooming very freely, each panicle of blossoms being from three to four inches across. The plants commence blooming when about a foot high, and by stopping the leads a handsome formed bush is easily obtained. It deserves a place in every stove collection. (Figured in *Bot. Mag.*, 4579.)

TROPÆOLUM PENDULUM.—A half-hardy annual, and a climbing plant, which has been introduced from Central America. Calyx of the flower yellow, with green tips; corolla yellow, with the two upper segments marked with red lines, and a violet-coloured bar near the edge. This very pretty flowered plant has been introduced to Berlin by Mr. Matthieu, nurseryman.

A COMPOUND FOR PROMOTING THE GROWTH AND BLOOMING OF FLOWERING PLANTS.

BY MR. H. STILWELL.

THE compound consists of sulphate of ammonia, four ounces, and powder of nitre, two ounces; mix these together in an earthen vessel, and add a pint of boiling soft-water. Cover it close down until it becomes cold, then put it into a glass or other bottle, and cork it down air-tight; the next day the compound will be fit for use. It must be used with care, and ought to be only in the hands of experienced gardeners. I have used this liquid with great success with both flowering plants, particularly the soft-wooded kinds, and vines in pots. I doubt not but its application will prove satisfactory, and be found a valuable acquisition to the early EXHIBITORS of plants at our first shows of the year.

To plants in pots add five drops to every quart of water, and apply it as follows: say the beginning to be on the first day of the month, then the third, then the fifth, being every alternate day. By this apparent small application the rapid growth of plants will be much promoted. It is, too, a considerable assistant in contributing to the earlier blooming of bulbous plants, whether grown in pots or glasses. To all the kinds of plants which I have applied it, I have found it to promote a fine healthy foliage, and a more quick bloom.

I used the above mixture to a vine growing in a pot this spring, and the advantage was very strikingly apparent after only six days using. Other vines were well fed with manure-water at the same time, but a very marked difference existed in favour of the former.

THE PROGRESS OF THE PELARGONIUM DURING THE LAST FEW YEARS.

BY ORION.

WERE a collection of Pelargoniums, say the best which were in cultivation in the year 1837, staged at one of our principal exhibitions side by side with one of those superb displays contributed by either Cock, Gaines, Beck, or Parker, of the present day, the contrast between them would better confute, rather than all the arguments which can be brought forward, the opinions of the not quite all-powerful "botanical statesmen" who have so long been striving to check the onward course of improvement in what are now understood as florists' flowers. FLORISTS' FLOWERS! what are they? The question will soon be difficult to decide, for now we see that florists do not disdain giving their attention to some of the more simple ornaments of the flower-garden, such as the Crocus, Gladiolus, Phlox, Ixia, &c. May we not reasonably infer that all flowers seeding freely in this country, and possessing a variety, may at some time or other be increased and improved in the same astonishing manner as we have seen has already been accomplished within the last few years by the assiduous care and attention of the deserving hybridizers, particularly in the case of the Pelargonium, Cineraria, Fuchsia, Verbena, and many other examples. The object of this paper is not, however, to give a treatise on the hybridizing of flowers, but to view the gradual ascent, as it were, from insignificance to splendour, of the justly popular flower the PELARGONIUM, or as it is still vulgarly called, but erroneously, the GERANIUM. We think that already having such gems or prizes, as the editor of the *Florist* terms them, as Ajax, Magnificent, Incomparable, &c., we may stand for a while "resting on the fruit of our labours," not thinking for a moment that perfection is yet attained, but glancing back to review the triumphant success already achieved by the patient exertions of twenty seasons, although accomplished step by step and year by year, we may gain fresh courage to be enabled to persevere in our onward course to reach the summit of perfection; and those of us who are able to remember the time when Smut, Bancho, Habranthum, and other (*now deemed*) unsightly varieties were figured in the pages of this journal (see page 121 in the volume for 1835) will think of what has been done since then, and still go on striving, till perhaps the next ten years may see as much improvement as the last.

As the varied use of the terms Pelargonium and Geranium unfortunately still continues to puzzle the amateur florist who is not acquainted with botany, perhaps the following explanation will be of service. Up to the year 1790 what are now denominated GERANIUM—CRANE'S-BILL, from *geranus*, *a crane*, in allusion to the crane-like beak which terminates the carpel of seeds, PELARGONIUM—STORK'S-BILL, and ERODIUM—HERON'S-BILL, from similar allusion, were comprised in but one genus, viz., GERANIUM; such then was the original FAMILY name. To the species of this family natives of our own country there had been, up to 1790, a considerable number introduced from other countries, and the botanists of that day deemed it essential to divide the genus, and there being peculiar distinctive properties by which certain divisions could be properly effected, that was determined upon.

The PELARGONIUM, or STORK'S-BILL, is grouped in the *natural arrangement* under the *order Geraniaceæ*, and by Linnæus (see Loudon) it ranks among the *class Monadelphia heptandria*, which implies that the flowers have *seven stamens* and one pistil united into one body. The GERANIUM, or CRANE'S-BILL, has ten stamens, and Loudon forms them into *Monadelphia decandria.* Loudon's catalogue enumerates no less than 190 species of Pelargoniums, all but 30 of which were introduced from the Cape of Good Hope; his catalogue also contains the names of about 180 hybrid or garden varieties. The Geranium only numbers 48 species, 15 of which are natives of Great Britain, and the majority of them rank as little more than weeds, few being ever cultivated, so that it is rather strange that the present small minority should give the name (quite erroneously) to a *large* and much more important *majority*, the excuse for which use now can only be "that sixty years ago the undivided family of very dissimilar species were known but under the name of *Geraniums;*" but it is the way generally, once spread an error abroad, it is a very difficult matter to fully eradicate it.

Loudon's list of garden varieties numbered only 180, but were a complete descriptive list now to be made of those which have been and now are not, and those in present cultivation, the labour required would almost rival that bestowed on the Great Exhibition Catalogue. It has been computed that somewhere between two and three thousand varieties have already appeared and passed away. But to those who are desirous of more fully investigating the botanical history of this class, SWEET'S GERANIACÆ is a work well adapted, and to it I would refer them.

But to the subject—"the progress which has been made during the last few years in the Pelargonium." The remarks about to be given are guided by the observations of one who has lived amongst these flowers for eleven years, and a book of *jotting* will be referred to occasionally, which the writer has kept during that time, assisted also by a collection of upwards of three hundred varieties of dried flowers, carefully preserved in a book, with the year of sending out, the price, and the raiser's name attached to each; but having, perhaps, already exceeded the amount of space which can be allotted to one article in one number, further remarks are reserved for another month.

CULTURE OF FRANCISCEA EXIMIA.

BY M. DE JONGHE, OF BRUSSELS.

THE great difficulty with which every one who attempts to cultivate a tropical plant in an European hothouse has to contend is ignorance of the habits of the plant, of its period of growth, of its period of rest. In consequence of this ignorance, which can only be dispelled by careful observation during two or three years after the plant's arrival, and in consequence of the eagerness of people to attain perfection all at once, and of their tendency to condemn everything that falls short, though for a brief time, of their expectations, many a new plant has been neglected and set aside, which, had a little more time been spent in endeavouring to bring it to perfection, would have proved well worthy of continued favour and increased popularity. It is then, in my opinion, the duty of every one who introduces new plants to make known everything concerning them which may enable the gardener to bring them as soon as possible into the highest degree of beauty, that they may not be prejudged, and thrown away as unworthy of notice. This I shall now proceed to do for the Franciscea eximia, which is certainly one of the most beautiful of newly-introduced plants, and of any hitherto brought from Brazil, and cultivated in European houses. The botanical description of this plant, which would be out of place in the columns of the *Gardeners' Chronicle*, is to be found in several of the journals more exclusively devoted to botany.

The Franciscea eximia was found by M. Libon in a virgin forest not far from Villa Franca, in the province of St. Paul, in Brazil. It grows naturally in shady places, in small open spaces in the forest, where it forms a bush two or three feet high. The flowers are numerous, richly coloured, and appear as well at the top of the stems as at the extremities of the lateral branches.

Three strong plants of this Franciscea, deprived of their roots and carefully packed, were carried by mules 180 leagues before they reached Sanctos, whence they were sent to Rio Janeiro, and from that town to Europe, where they arrived, alive, in November 1847. Immediately after they were unpacked, one of them was placed in leaf-mould, unmixed with other substances; another was placed in a mixture of equal parts of some yellow earth from Brazil, and leaf-mould, with a little charcoal; the third was planted in a still more substantial soil. The last gave no signs of life; the second sent forth with difficulty a few weak shoots; the first, at the end of a month from the time it was planted, showed signs of vigour, and at the end of three months it had sent out some fine roots, which lined the pot confining them. Guided by my success with this plant, I replanted the other two in pure leaf-mould, but they had suffered so much that it was with difficulty they were brought round. The first, properly treated at the outset, has maintained its superiority over the other two.

The flowering period of Franciscea eximia is the same in our hot-houses as in Brazil, viz., from January to June. In winter, the plants, both great and small, but more especially the latter, should be kept in a temperature of from 10° to 12° Réaumur (54° to 59° F.) The period of its normal growth begins in December. The flowers are formed upon the young wood; the earliest appear on the stem and the principal branches, then on the lateral ones, where a succession is kept up for some months. The small plants, which are not more than eight or ten inches in height, have already two or three flowers at the tops of their stems. Perfection is not to be looked for until the plants are two or three years old. The original plant obtained at the exhibition of the Société de Flore, at Brussels, a medal, as the most beautiful new plant there. This same plant, which I have never used for propagation, bore in 1850 more than three hundred flowers, from January to June. The flowers, which in form resemble the great Periwinkle, are richly coloured with violet, blue, and white, and contrasting as they do with the glaucous foliage behind them, produce a most beautiful effect.

The plants, if they have rooted well, may in the month of March be placed in a temperate house, in a shady and airy situation; they may be put very well in the midst of Camellias, and left there all the summer; their shoots will not become blanched, their growth remains vigorous and short-jointed, their flower-buds are well-formed, and the flowers are abundant and last a long time. Towards the end of July, when the young wood is well ripened, the plants may be repotted. This is the best time to repot them, for if they are repotted later, they will not flower so early.

In October, the plant should be again placed in the coolest part of a hothouse, where it should spend the winter. If these directions be attended to, the Franciscea eximia will be found to be easy of cultivation, and to form a valuable addition to ornamental hothouse plants. —*Gardeners' Chronicle.*

BRIEF REMARKS.

Capsicum Fumigating.—I find, in perusing the *Cottage Gardener*, that Mr. Beaton, one of the writers, has with admirable success tried the Capsicum, or Cayenne-pepper, as a substitute for tobacco, in destroying the green-fly. He recommends every one this season to cultivate a quantity for the express purpose. If this can really be brought into general practice, doubtless many will duly appreciate so valuable a discovery. Tobacco is not only expensive, but highly objectionable, especially where plant structures are attached to the mansion, as the fumes of tobacco may be detected in every room when it is necessary to use it for destroying insect life. We all know, however, that it is a safe and sure remedy, and it will not do to repudiate the one until we are practically acquainted with the other. I have no desire to appear sceptical, but at present I look upon the discovery as being only in its infancy and trial. It is an experiment, however, which I intend to subject to a fair test, and judge for myself, the result of which, if acceptable, I will make known through the medium of the Cabinet.—*G. Fry.* [We shall be obliged by the favour as early as convenient.]

Cycas revoluta.—This very singular apetalous plant is now blooming at J. Penn's, Esq., of Lewisham, in Kent. It is in the best possible condition, and, like many of our stove inmates, is a curious and interesting plant.—*G. Fry.*

Tea Roses.—The Tea Rose, on account of its beautiful tints and peculiar fragrance, is a general favourite; yet with amateur cultivators, who, like myself, reside within a few miles of the metropolis, and who are compelled necessarily to grow it under glass in pots, it turns out a complete failure after a season or two. We may be successful with most kinds of plants, but this one proves always more than our match. With great care, I get at first certainly very satisfactory specimens, but I find it impossible to keep the plants in the same state, and the blooms speedily deteriorate. However, before giving up this vexatious and disappointing culture, I have made a new attempt, which has been quite successful, and it is to make this plan known that I trouble you with these lines:—I planted about fifty half-standards and dwarfs in the autumn, consisting of Souvenir d'un Ami, Elise Sauvage, Adam, Devoniensis, &c., in a well-prepared compost, and I erected a low span-roofed house over them, having glass sides to the ground, and side windows for ventilation, and I find it to answer admirably; the plants are looking remarkably healthy, and promise well; the shoots are most vigorous, and are covered with buds.—*W. G., Stoke Newington.* (*Gardeners' Chronicle.*)

Treatment of Venus Fly-trap.—Clericus solicited, in a recent number, some particulars of a successful management of this singular plant, and some observations having appeared in the *Gardeners' Magazine of Botany* upon its treatment, we have extracted the following, as given by a cultivator, Mr. Brown, now in the Tooting Nursery:—

"For soil, use equal parts of fibrous peat and of sphagnum cut very short, mixed with a little sand. The pots should be well drained; five-the flower. Many sorts, supposed to be run, will return. This has happened with Martin's President (P.F.), Sharp's Defiance (S.B.), and many others. The chances of clean flowers are not equal, whether you propagate from run or clean flowers, by which I mean to intimate my opinion that as many plants will probably return to fineness from the one as from the other. As for compost, I should pronounce half dung to be excessive, as far as the ultimate soundness of the stock is concerned. By no means should the loam be deprived of any of its fibrous rooty matter; that I consider by far the better part.—*J. W. Newhall, Florist.*

CARNATIONS AND PICOTEES.—I am an old GROWER and SHOWER of these beautiful flowers. Take my advice in potting. For vigorous-growing kinds have pots a foot across the mouth; for weakly ones ten inches across. Have clean pots to start with. Use a year-old turfy loam, that has been chopped and turned a few times. To it add another equal part, consisting of *well-rotted dung* and *vegetable* or *tea mould.* Have a liberal drainage of bits of turf and charcoal, two to three inches deep.—*Senex.*

CINERARIA HAVING THE SCENT OF THE HELIOTROPE.—A lady, resident in Sussex, has a variety whose blossoms have this delicious fragrance. The flowers are white. It is a valuable acquisition to this charming tribe of flowers. Attempts to have a race of this class no doubt will be made, and with due care will be realized, and may be kept permanent.

A GOOD YELLOW FLOWER FOR A SMALL BED.—Lucy asks for the name of such. The best we know is Escholtzia crocea compacta. Sow seed immediately, and the plants will bloom from June to the end of the season. It is a compact grower, and blooms profusely; the flowers of a rich deep orange-yellow. The best way to treat the plant for this purpose is—sow seeds in August in small pots, and keep them in a cool frame or sheltered place through the severe part of winter; then turn them out into the bed the first week in March. In April sprinkle a portion of seed between the plants. These will be in their prime when the former are ceasing to bloom; by this means seven months' bloom may be had. The bed thus being stacked will remain so; only should any die in winter, sow a portion of seed to fill up such vacancy. It is a very showy and neat plant. There are other yellow-blooming annuals; but they only flower for a short time.—*A Flower Gardener.*

CULTURE OF BALSAMS.—When four inches high, pot off singly into small pots, and plunge them in a hot-bed frame. Do not allow the roots to become matted around the ball, but repot early enough; keep shifting till you have them in the large pots for final blooming, which ought to be a foot across the top. Never allow any blossom till the plant has attained the size you want it; and it ought to be bushy, nearly as wide across as high. Therefore clip off all the flower-buds at the earliest stage, which induces the vigorous and rapid growth of the plant. Use a mellow turfy loam, such as has been laid up and chopped for a year; to this add equal portions of leaf-mould and well-rotted hot-bed manure, a sprinkling of pieces of charcoal and charred bones, with a liberal drainage of pieces of turf and bones, and a free supply of water, majestic robust specimens will be produced.—*A Nobleman's Flower Gardener.*

THUNBERGIA ALATA, AND ITS VARIETIES.—We now have a most beautiful race of these very charming flowering plants, the buff, yellow, orange, white, &c., with their very distinct dark eye; they merit a place, where practicable, for summer ornament, in-doors or out. A more charming tribe of climbing plants does not exist. A friend of mine has sent me the following particulars of growing the plants to an extraordinary size, and, of course, to obtain an equal improvement in the quantity and the size of the flowers:—

"*Culture—Soil.*—The finest specimens we ever observed were grown (after they had attained the height of six inches) in a mixture of loam and night-soil, which had been well incorporated for twelve months, and frequently turned over to mellow and sweeten. In this exceedingly rich strong compost the plants grew with a vigour and luxuriance that was perfectly astonishing. The leaves were nearly double the usual size, and the flowers were much larger and more highly coloured. It may, however, be not always convenient to obtain this rich stimulant."—(Such a compost may not be provided; but they flourish most admirably in a compost of equal parts of good turfy loam, sandy peat, leaf-mould, and well-rotted manure, and supplied with a liberal drainage.—EDITOR.)

DOUBLE ROCKETS.—I suppose the reader now (April 2) to have nice healthy plants; then the first thing to do is to get some strong loam, one barrow-load to half a barrow-load of decayed cow's or sheep's dung, and two shovelsful of river sand; mix the whole together well, and then you are ready to begin to plant. If you plant them in the border amongst the other hardy herbaceous plants they will thrive well; and if in a rather shady damp place all the better. Turn out for every plant say one foot square of the old soil, and fill up the hole with the prepared compost, and place your plant in the middle, rather deep; give a little water, and a little liquid manure water when they begin to grow vigorously. Thus generously treated, they will bear flower spikes of eight or nine inches in length. The way we grow them is in a round figure, or clump, prepared with the same compost. We plant the German, which is sometimes called the French White, which is shaded with a purplish tinge in the centre. This is a strong vigorous plant, indeed the strongest of all the kinds I have; and twelve inches from them another row of the same, which grows about two feet high; then twelve inches from that I plant round the Blue, of late introduction, which grows eighteen inches high; and twelve inches from that again we put the Old Queen, which grows from twelve to eighteen inches high. I should have said there must be twelve inches between plant and plant. They all come into flower within a few days of one another, and when in flower they are truly beautiful. Whenever the flowers begin to fade, I cut them down to within two inches of the ground, and make cuttings of the flower-stems so far as they are leaved; generally each stem makes two cuttings. After the old stools have remained a fortnight they begin to start fresh growth; and I then lift them, and divide them into pieces, and plant them in a shady border with decayed leaf-mould and sand in equal parts.—*Cottage Gardener.*

PROPAGATION OF BOURBON, NOISETTE, AND CHINA ROSES, ALSO OF MANY OF THEIR HYBRIDS.—Make cuttings of the last year's shoots, about six inches long, cutting horizontally across close under a bud, or, which is better, exactly where the last year's shoot pushed from. A bed should be prepared on the north side of a wall, or similar shady place, throwing out the soil a foot deep, and filling in four inches deep with sifted coal-ashes; upon which place a layer of three inches of good loam and leaf-mould, and fill up the remainder with a good moist sand. This being made firm the cuttings must be inserted, and then a liberal watering to settle the sand around the cuttings. No other attention will be necessary, unless the weather be dry, when a sprinkling over the tops with water, by means of a syringe or fine water-spout, should be given early in the morning for the first fortnight. With such treatment I last year raised more than five hundred plants from the refuse of my Rose-prunings.—*An Amateur Grower.*

ACACIAS.—The genus Acacia, as now restricted, still contains about four hundred described species, which are extensively diffused within the tropics of the old and new world; they are also found in some extra-tropical countries, especially in Australia, which country alone contains more than one-half of the known species. This genus, in its normal or typical form, has conjugate and variously pinnated leaves, which character is common to all the species in their nascent or seedling state, and is permanent with about one-half in all stages of their existence; the other species soon lose their true leaves, their place being supplied by the petioles, which take various forms, assuming the appearance and performing the functions of leaves. In a few instances the true leaves may be seen borne on the apex of a broad leaf-like petiole; but the latter is readily known by its not having an upper and an under surface (as in true leaves), the two sides being vertical and uniform. With the exception of two or three species, the leafless group are all natives of Australia. They are found upon all the coasts, and equally diffused in the interior; and by their numbers they form a leading feature of the vegetation, some of the species, by their glaucous and hoary aspect, giving a peculiar character to the landscape, generally indicative of an arid country. As the seeds of Acacias, like those of most of the Leguminosæ, are not easily destroyed by long voyages; many of the species have from time to time been introduced into this country, more especially from the extra-tropical parts of Australia; as they are, also, of easy cultivation, and many of them of robust growth, and very showy when in flower, they have become favourites in the greenhouse, and for planting in large conservatories.

BEST SOIL FOR ROSES.—A STRONG loam, half a yard deep, having a DRY substrata, exactly suits the Rose. In any other the plants soon perish. They delight in a cool soil, but a stagnant wet bottom is fatal to them; therefore drain well in such places.

PEAT CHARCOAL.—This is valuable as an element of manure, for which some of its properties eminently fit it. It appears to possess the property of absorbing gases to a very considerable degree, a power to which its peculiar open porous nature greatly contributes. The value of charcoal as a constituent of the soil depends almost wholly on its physical condition, for a dense (close) charcoal is of little or no use, and the more open and porous it is, the more serviceable to plants, acting as a constant magazine of gaseous food.

HEATING A FORCING-HOUSE.—I have just put up a small forcing-house, ten feet long by about seven feet wide, for the purpose of striking cuttings, forwarding Gloxinias, &c., and hastening plants into bloom in winter. I do not know how to treat it. I wish to have both top and bottom heat. Would a tank answer for the latter? And do you think I could place the flue from the fire-place below the tank, so as to supply atmospheric heat? Perhaps you would inform me of the probable cost of the above. If the above plan would not answer, perhaps you would have the kindness to insert in your next Number the best plan for treating it, and at the same time a cheap one.—(We advise you not to try the tank system. We have seen a great deal of it, and in winter the houses and plants have been saturated with the exhalation. We never saw an instance of its succeeding to satisfaction. Hazard's system of heating, where there is no smoke, &c., answers admirably. We will send you every particular. Nothing can be better than it is. An account of it is given in this Magazine: see volume for 1847.—EDITOR.)

CORONILLA GLAUCA.—This very free flowering plant can be had in bloom throughout the year. Its pretty yellow pea-formed flowers, produced in fine clusters, are at all times interesting, but it is during autumn, winter, and early spring that they are especially so, for which period the plant is an unrivalled bloomer, and merits a place in every greenhouse or sitting-room window. The blossoms too are fragrant. The plant is nearly hardy, so that in a common greenhouse it thrives freely. It is of easy culture. Cuttings strike root readily in spring, and the plants flourish in a compost of equal parts of turfy loam, turfy peat, and old pulverized cow-dung. The plant furnishes an abundance of fibrous roots, and therefore requires plenty of pot room, and when growing a very free supply of water. It amply repays for any attention given in its management. It is adviseable to raise fresh stock every second year. I have tried it in the open ground, but it produces very few flowers when so grown.

ONE SHIFT SYSTEM OF POTTING PLANTS.—The principal object aimed at in this system is *rapidity* of growth, and to possess a fine specimen in a much less period of time than could be readily realized by frequent repotting. By this practice the labour of repotting is saved, nor do the plants require such frequent watering. To do this effectually you should have a plant that has not had its roots matted around the side of the pot; a young plant whose roots naturally extend every way is the sort to begin with. It is true a very small plant in a large pot looks unsightly, and such pots take up a large space, and should the greenhouse, stove, &c., be small it is very objectionable. However, where *quick* growth is concerned, the system has its advantages. In order, however, for the small plants to succeed well placed in a large pot, there must be a very liberal drainage to allow superfluous water to pass away. Compost must be in a rough state, only rubbed or chopped. Turfy loam, turfy peat, &c., are essentials to success, and pieces of charcoal intermixed are very beneficial. The surface of the soil must be half an inch below the rim of the pot, to hold water sufficient to moisten the *entire ball* at every watering.—*A Practitioner.*

GERMAN ASTERS, &c.—I saw the Aster last autumn exhibited for sale in the flower markets of Paris, in greater perfection than I have yet seen it grown in England. They were brought in pots of all colours, not with lateral or straggling branches upon them, but with straight stems, and surmounted with tufts of flowers, well up in the centre, many of them as large as dahlias; these pots were readily purchased by the Parisians, to ornament their shop windows, sitting rooms, halls, and saloons.

Another point in which the French appear to excel us, was the tasteful manner in which the market women exhibited their bouquets of cut flowers; these were made on the spot, and when composed of dahlias were mostly of a dome shape, the flowers appearing in different coloured circles, and so placed as to reflect each other's beauties; sometimes the circles were horizontal, sometimes vertical; but whether the nosegays were formed of dahlias, or of a mixture of smaller and more tender flowers, as the verbena, geranium, &c., the same attention to contrast of colour prevailed, and all were placed in a neat white paper envelope. " Thank you," said a lady to me, as I handed her one of these bouquets, on her alighting from the railway carriage at Tonbridge, " I brought that from Paris, to show my friends how much better they manage these things in France."—*S. P.*, *Rushmere.*

FLORISTS, &c., OF ST. PETERSBURGH, THE CAPITAL OF RUSSIA.—In a climate so adverse to the general cultivation of flowers in the open air as is Russia, it is very pleasing to know that an almost universal love of flowers exists in that country, and recourse is had to almost a general cultivation of them in plant-houses, dwelling-rooms, &c. The following interesting account, in confirmation of the above statement, is given in Mason's Reports on St. Petersbugh, which appears in a recent number of the *Gardeners' Chronicle*:—

" *Florists.*—Among the different florists of St. Petersburgh, M. Alwarch, a German, stands first. He cultivates nothing but those plants which are universally sought after in Russia, viz., good evergreen shrubs and bushes. These plants, which are brought into Russia in pots, are sold in large quantities to the nobility, who, in winter and the commencement of the fine season, use them for the internal decoration of their houses. We may mention more especially Gardenia florida, Ixora coccinea and others, Lantana, Musa, Æschynanthus, Asclepias curassavica and Hoya carnosa, Echium, Gesnera, all of which are cheaper in St. Petersburgh than in Paris. Such is not the case with the hundred-leaved, crested, four-seasons, and Belladonna Roses, which, when in flower, fetch 2*s.* 6*d.* and 5*s.* The Myrtle-leaved and Chinese Orange-trees are also very dear, as are also Pelargoniums and Fuchsias. Franciscea odorata and Hopeana are great favourites; Begonias and Gloxinias cost half as much again as they do in France. Camellias and North American Azaleas fetch most extravagant prices. The same gentleman has a large collection of Rhododendron ponticum maximum, and other species; but we look in vain for out-door Azaleas, Calceolarias from Chili, or Cacti from tropical America. As for Myrtles, Pomegranates, Laurels, Jasmines, climbing Roses, Dahlias, Pinks, and Spanish Jasmines, they are rare and costly.

"Besides evergreen shrubs, M. Alwarch cultivates, though upon a smaller scale, out-door shrubs. We principally noticed some bushy plants, capable of resisting the severe frost of the country, such as Cornus mascula, alba, and sanguinea, Elders, Spiræa lævigata, rosea, and ulmifolia, common Lilacs, Chamæ cerasus, Snowdrops, Snowberries, Service-trees, Sweet Chestnuts, Pteleas, Poplars, especially the true sweet-scented suaveolens; Caragana, with which beautiful undulating hedges are made; the charming red-fruited Acer tataricum; Buckthorns, and particularly the one from Tartary, which constitutes a large part of the live hedges in the country; lastly, Cratægus purpurea, with its handsome foliage, far surpassing in colour that of C. alba. The latter plant attracted my especial attention; its beauty, the rapidity of its growth, and other excellent qualities, enable the Russians to make live hedges, which we should very much like to see introduced into our own country.

"*Flower Markets.*—One of the first things which strike a stranger entering St. Petersburgh is the evident passion which all the inhabitants, rich and poor, old and young, have for flowers. The eye admires, with surprise and delight, the halls and rooms of all classes, which, for eight or nine months in the year, are more like conservatories than the interior of common dwelling-houses, being gay with plants of every clime. Whilst out of doors the country is desolated by the severity of the cold, in-doors we find Palms and Figs, Musas, Dracænas, Marantas, the large-leaved Arums, Camellias, Rhododendrons, and Azaleas; also some beautiful Leguminosæ, Mimosas, Cytisus in pots, Myrtles of all sorts, Olea fragrans, the large Clethra, different sorts of Laurel, and lastly, but most conspicuous, are the hundred-leaved and four-seasons Rose, Hyacinths, and other flowering plants.

"The working classes, who cannot command a wide range of temperature, prefer such plants as Crinum, Maranta, Hoya carnosa, Asclepias curassavica, and Lantana; Oranges, Jasmines, Plumbago capensis, Ixora, Gardenia, Echium, and occasionally, too, the common Laurel, Cytisus, and Olea fragrans.

"The poor, who are compelled to live continually in the town, grow Pelargoniums, Roses, Verbenas, Fuchsias, Wallflowers, and, in spring, Lilies of the Valley.

"*Flower Trade in St. Petersburgh.*—A fair, which is held as soon as the frosts are over, and which lasts a whole month, viz., from the 25th of May to the 25th of June, is almost exclusively a flower fair; it is at this fair that the nobility and country gentlemen make their purchases for decorating their country houses, to which they are about to retreat. The flowers are supplied almost entirely from Germany. We remarked the hundred-leaved and four-seasons Rose, planted in a sort of hamper; Cherry, Apple, Plum, Service, and Sweet Chestnut trees, a few Pear-trees, all shrubs, and selling for double what they do in Paris; the Lilies of the Valley, especially, seemed to bear a most exorbitant price. We saw, too, Pæonies, and all sorts of perennial and shrub-like plants.

"Flowers are sold, too, by travellers, who go from house to house, carrying upon their heads boards, upon which the flowers in pots are closely packed. But these pedlars offer their purchasers neither variety nor beauty; a few Wallflowers, Pelargoniums, Fuchsias, Lilies, Echium, Gesneras, Roses, Mignonette, Cinerarias, Verbenas, Phlox, and Justicia, form the whole of their collection.

"Although there are many more florists in St. Petersburgh than in Paris, the collections of the former are much more meagre than those of the latter. Their trade in bouquets and flowers in pots is prodigious, far surpassing what we had imagined."

MR. GROOM'S TULIPS.—All lovers of this beautiful tribe of flowers who have the opportunity should visit this noble collection, now in its meridian splendour. His pet bed is fifty yards long, and consists of seven rows, comprising two thousand Tulips. We should be glad to give particulars of all the kinds here, but reserve them for a future number. The following were the most striking: *Roses*—Catafalque, Duchess of Sutherland, Camuse de Croix, Countess of Wilton, Catalina, King of Saxony, Fleur de Maria. *Byblomens*—Claude, Imperatrice florum, Michael Angelo, Louis the Sixteenth, Victoria Regina, which Mr. Groom states is the best Tulip he has raised. *Bizarres*—Prince Albert, Prince of Wales, Duke of Cambridge, Duke of Devonshire, Duke of Norfolk, Duke of Sutherland, Everard, Marshal Soult, Nourri Effendi, Lord Sandon, and Dr. Horner, which proves to be of first-rate excellence and a second-row flower. The price affixed to it is one hundred guineas; the prices of the others above named are from ten shillings to ten guineas.

EXHIBITION AT THE HORTICULTURAL SOCIETY'S GARDENS AT CHISWICK ON MAY 3RD.—The day was very unfavourable, the rain falling heavily a great part of the day; consequently the attendance was not equal to the first exhibition of former years. The specimens exhibited, however, were far beyond any former meeting in point of excellence. There was scarcely a specimen but what was superbly cultivated.

We have not space for all the particulars, and must only notice those most likely to be interesting to our readers, enumerating, for their guidance, what are the most showy and valuable plants for general cultivation. This plan we adopted last year, giving only *one insertion* of such generally exhibited plants in each volume, and then remarking upon *new plants* only which are shown at the subsequent meetings held at the three great Societies' exhibitions, held at Chiswick, Regent's Park, and the Surrey Zoological Gardens. The following were exhibited at Chiswick on May 3rd:—

In collections of twenty *Stove and Greenhouse Plants*, the large Gold Medal was awarded to Mr. May, gardener to Mrs. Lawrence, of Ealing Park. At the back of this group stood an enormous example of the large-flowered Epacris; an Azalea, profusely clothed with double flowers of the richest red; a white-blossomed Heath; two varieties of Eriostemon, one forming a cylinder of little white stars at least seven feet high; two Polygalas, the white variety of Erica vestita, two Chorozemas, the beautiful Boronias pinnata and serrulata, the useful Podolobium staurophyllum; a Pimelea spectabilis, forming a ball of flowers five feet in diameter; the Baxter Leschenault, the Java Ixora, most beautifully blossomed; the Cels Hovea, Gompholobium polymorphum, a red Azalea, and Pultenæa stipularis.—Another collection of twenty was contributed by Mr. Cole, gardener to H. Colyer, Esq., of Dartford. It comprised a huge example of the imperial Hoya, in finer condition, perhaps, than it has ever before been seen in a pot; the Box and Oleander-leaved Eriostemons; Dillwynia juniperina, two Polygalas, the pretty Cape Heath called Favoides elegans, Clerodendron splendens, unusually well flowered; the Cels Hovea, in charming condition; an Everlasting, Murray's Azalea, the scarlet and saffron Ixoras, Leschenaultia formosa, Franciscea acuminata, loaded with blossoms, which shed a most delicious perfume; a double-red Azalea, Podolobium staurophyllum, Mrs. Lawrence's beautiful variety of Chorozema, and a Cape Heath.—Groups of twenty plants were also contributed by Messrs. Frazer and Pamplin. The former had the Broughton Azalea, Eriostemon myoporoides, the Berberry-leaved Podolobe, Pimelea linifolia, a large variety of the Baxter Leschenault, the Boronias serrulata and pinnata, Eriostemon cuspidatum, three Chorozemas, Polygala acuminata, the blue Leschenault, an Everlasting, the Oleander-leaved Eriostemon, the lovely Erica propendens, the glowing Azalea Minerva, the showy Adenandra, and two Cape Heaths. Mr. Pamplin sent four Cape Heaths, three varieties of Azalea, the opposite-leaved Polygala, Pimelea lanata and P. spectabilis, the latter insufficiently in flower; Euphorbia splendens, the Box-leaved Eriostemon, Dillwynia juniperina, the Cels Hovea, a handsome bush of the useful Genista racemosa, and one or two other plants.

There were two collections of fifteen *Stove and Greenhouse Plants*. The first by Mr. Green, gardener to Sir E. Antrobus, Bart. The second by Mr. Taylor, gardener to J. Coster, Esq., of Streatham.

Seven collections of ten *Stove and Greenhouse Plants* were exhibited. The first by Mr. Carson, gardener to W. F. G. Farmer, Esq., of Nonesuch Park, Cheam.

Azaleas were numerous, large, and fine; and they made, as they always do at the May show, a very striking display. Two excellent collections of twelve plants were produced; one from Mr. Green, gardener to Sir E. Antrobus, Bart.; the other from Mrs. Lawrence, of Ealing Park. Mr. Green had huge specimens of Double Red, Gledstanesi, lateritia, præstantissima, vivicans, sinensis, coronata, exquisita, optima, triumphans, variegata, and Rawsoni.—Mrs. Lawrence sent fine bushes of optima, Gledstanesi, præstantissima, coronata, Rawsoni, variegata, speciosissima, rosea superba, Lawrenceana, exquisita, sinensis, and lateritia.—Groups of six plants were furnished by Messrs. Carson and Frazer. Among these we remarked pulchra, double red, Gledstanesi, lateritia, variegata, speciosissima, splendens, Fielder's White, violacea superba, Smith's Red, and the Chinese Yellow.

Rhododendrons.—A magnificent collection was shown by Mr. Ivison, gardener to the Duchess Dowager of Northumberland, at Sion House. It consisted of beautiful light and purple flowered kinds. The best of the former were stated to have been obtained between altaclerense and the white ponticum; the others between altaclerense and the white tree Rhododendron.

Roses in pots surpassed any exhibition of the kind we have hitherto seen. The collections of both dealers and amateurs showed that each had done his utmost, and the result is that the cultivation of the Queen of Flowers in pots has attained a degree of perfection beyond which it can hardly be expected to be carried. Notwithstanding the little sun we have had, the flowers were beautifully coloured, especially those on Messrs. Lane's plants, and the foliage was ample and clean. The gems of Mr. Francis's collection, to whom the first prize was awarded, were Paul Perras, with blossoms regularly dispersed over the plant, large and well blown; Coupe d'Hebe, with flowers rich in shape and colour, reminding one of those of the old-fashioned Cabbage; Lamarque, a good white, and said to be beautifully scented; Armosa, a profuse blooming medium-sized Rose; Chénédole, and La Reine. We observed in all instances that the buds of the latter did not open kindly. Madame de St. Joseph, in Messrs. Paul's group, which was second, was the admiration of everybody. It is a delicate salmon, with a delicious fragrance, and the plant was covered with blossoms; Vicomtesse des Cazes had been very fine, but its beauty was somewhat on the wane; not so Niphetos, which was just in perfection, and studded with flowers of snowy whiteness; William Jesse and Comte de Paris were also in beautiful condition. Messrs. Lane's plants were insufficiently in bloom; three or four more bright days might have placed them in a different position. Among them were the universal favourites, William Jesse, Duchess of Sutherland, Aubernon, with foliage broad and clean; and the glorious Géant des Batailles. The first of these possessed a surprisingly fine colour for the season. In the collections of Messrs. Terry, Rozer, and Rowland were Aubernon, Fulgorie, Mrs. Bosanquet, Nina, Marquise Boccella, La Reine, Armosa, Géant des Batailles, Blairii No. 2, Augustine Mouchelet, Duchess of Sutherland, Goubault, William Jesse, and Baronne Prevost, the latter with flowers at least six inches in diameter.

Cape Heaths were numerous, and generally finely flowered. Excellent plants were furnished by Mr. Smith, Mr. Cole, Mr. Over, Mr. Roser, Mr. Taylor, Mr. Stewart; and in the Nurserymen's Class by Messrs. Rollisson, Epps, Fairbairn, and Pamplin. The specimens, both in eleven and eight-inch pots, were famous examples of good Heath growing. In the different collections we remarked the following varieties:—Tortiliflora, fastigiata lutescens, suaveolens, ampullacea carminbrata and vittata, ventricosa superba, coccinea minor, propendens, favoides elegans, mutabilis, mundula, dilecta, aristata major, Beaumontiana, perspicua nana, M'Nabiana, denticulata moschata, elegans, vasiflora, Sprengeli, Hartnelli, andromedæflora, triumphans, viridis, Sindryana, primuloides, odora rosea, florida, campanulata, Cavendishii, mirabilis, Thunbergiana, depressa, and Webbiana.

Single Specimens.—The best consisted of two plants of the glorious Medinilla magnifica, and a fine bush of Erica elegans from Messrs. Veitch; a beautiful example of Erica Sindryana from T. B. Graham, Esq., of Lavender Sweep, Clapham Common; the charming Chinese Indigofera decora from Mr. Ivison, gardener to the Duchess Dowager of Northumberland, at Sion; and a nice plant of the Griffith Ixora from Mr. Green. In addition to these, Messrs. Veitch furnished the Jasmine-flowered Rhododendron; Mr. Cole, the Cels Hovea; Mr. May, Boronia serrulata; Mr. Stewart, Physolobium gracile; Messrs. Fairbairn, Erica favoides elegans; and Mr. Stanly, E. Hartnelli.

Some interesting novelties were produced. Messrs. Veitch had the lovely Cantua dependens; M. Baumann, of Ghent, Deutzia gracilis, a white-flowered, slender-growing, hardy shrub, from Japan; Mr. Loddiges, an Aerides, with long racemes of gay rose-coloured blossoms, and a new Lycaste, from Bolivia, with pale yellow flowers; Messrs. Henderson, the Broughtonia violacea; Mr. Franklin, gardener to Mrs. Lawrence, an Epidendrum; Mr. Carson, Trichopilia coccinea, a promising species, with a large dark red-coloured lip; Mr. Cole, the Oleander-leaved Allamanda; Mr. May, gardener to Mrs. Lawrence, Pimelea Nieppergiana; and M. de Jonghe, of Brussels, a rather handsome Billbergia. These, together with two or three other plants, either not new or unimportant, constituted all that were exhibited in this class.

Pelargoniums were entirely confined to "Fancies" and "Capes," both of which are advancing rapidly in public favour; and, when we consider the variety of colours to be found in the latter, the curious stains and markings of the former, together with their profuse flowering habit, this growing change in their favour is not to be wondered at. Fancies were produced in admirable condition by Mr. Ayres, of Brooklands, Blackheath, and Mr. Ambrose, of Battersea. In the former group, whose flowers were large and fresh, were Queen Superb, Statinski, picturatum, Hero of Surrey, Alboni, and Gipsy Queen. Mr. Ambrose had picturatum, Defiance, Madame Meillez, Ibraham Pacha, Formosum, and Anais. Mr. Roser's Cape species were well grown and very attractive.

Pansies in pots were exhibited by Mr. Bragg and Mr. Turner. It was predicted that this mode of showing Pansies would prove a failure; but so far from that being the case, we imagine that before long, the system must be universally adopted, so tasteful and effective were those exhibited on Saturday last. Mr. Bragg's varieties were, Ophir, Mr. Beck, Polyphemus, Constellation, Junius, Conspicua Juventa, Madame Sontag, Eliza Ann, Queen of England, Lady Carrington, and Flying Dutchman. Mr. Turner's plants were, Juventa, Polyphemus, Queen of England, Surplice, Mr. Beck, Mrs. Hamilton, Thisbe, Almanzor, Swansdown, Constantine, Leader, Ophir, Goliah, Euphemia, Duke of Norfolk, Disraeli, Constellation, Aurora, Bellona, and Supreme.

In the tent provided for seedlings Messrs. E. G. Henderson, of the

Wellington-road Nursery, had a fine collection of new Cinerarias, containing Lady Hume Campbell, white, edged with blue; Marianne, white, tipped with rosy lilac, good in form; Dora, white with lilac disk, but wanting in substance, and Prince Arthur, bright rosy purple. Mr. Hoyle sent Pelargoniums; Chieftain, a dark crimson blotch, lower petals clear rosy crimson; Magnet, brilliant purple crimson, with dark blotch, a fine, bold, free-flowering variety, possessing great substance. Mr. Kinghorn had an Epacris, named Conspicua, a free-flowering kind, in the way of grandiflora, but a considerable improvement on that variety.

HAMMERSMITH HEARTSEASE, *May 7th.*—We remarked the following in fine condition:—Almanzor (Thomson), Ophir (Widnall), Polyphemus (Thomson), Commander-in-Chief (Youell), Constantine and Bertha (Turner), Mrs. M. Hamilton (Nasmyth), Mr. Beck (Turner), Inventa (Hooper), Duke of Norfolk (Bell), Diadem (Fellowes), Dora, Mrs. Beck, and Euphemia (Turner), Constance and Masterpiece (Hooper), Duke of Perth (Handasyde), Pompey and Sambo (Hale), Rainbow (Hall), Queen of England (Fellowes), Elegant (Thomson), Sir J. Franklin, Penelope, Premier, and Ophelia (Fellowes), Rubens, Sir R. Peel, and Zabdii (Thomson), Ibraham Pacha and Addison (Turner), Thisbe and Supreme. Class showing—for white ground flowers: 1, Mr. Turner, for Almanzor. Yellow ground: 1, Mr. Turner, for Diadem (Fellowes). Yellow or straw (selfs): 1, Mr. Lane, for Ophir. White: 1, Mr. Turner, for Swansdown. Dark: 1, Mr. Bragg, for Sambo. Mulberry: 1, Mr. Treacher, for a Seedling. The prize of 20*s.*, given by M. Brown, Esq., for the best Seedling, was awarded to Mr. Turner, for "Chieftain," a yellow ground flower, with rich bronze red margin, fine eye, shape, and substance. There were some other seedlings possessing considerable merit; altogether the show was much better than we had expected, owing to the lateness of the season.

TO DESTROY THE FLY WHICH ATTACKS THE ROSE-BUSHES.—Mr. Benton states, in the *Cottage Gardener*, he has tried the following method with success:—Try the effect of clear liquid manure on the fly; and to prove that it is not too strong for the young leaves, first pour some of it over nettles, or some other green weeds full in the sun, and if it is too strong it will scorch them in twenty minutes in the middle of a hot day; add more pond water to it and try again, and when you have it so reduced that soft leaves do not mind it, pour it with all your might against the roses from a garden-syringe, or hand-engine, any time in the day; but, perhaps, the evening is the best time, as the plants will be wet all night, and the bad smell will stifle the creatures. I have found the plan most useful, and I have great faith in it. A certain destruction will be effected by making use of Sangster's Florumbra to cover the tree with, and Brown's Fumigator, with a supply of tobacco, and having lighted it, puff away till the cover is full of smoke. This is soon accomplished. If the plant be covered with a sheet it will hold the smoke, but care will be necessary not to injure the shoots and buds.—*Rosa.*

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

THE recent fine weather would allow for the planting out in beds, &c., half-hardy as well as the tender annuals, Heliotropes, Pelargoniums, Verbenas, Petunias, Celsias, Zinnias, Stocks, &c.; but any omissions should be attended to at once.

We have frequently called the attention of our young readers to the desirability of paying strict attention to the judicious arrangements of flowering plants, as regards height and harmony of colouring. It is true that, of late years, this subject has become a matter of study amongst gardeners, and great changes for the better have taken place in this respect; still we are far from supposing that we have arrived at perfection. Always bear in mind—if beauty, order, and effect are desired—that attention to this, next to a well laid-out flower-garden, is essential to their full development. In producing well-arranged contrasts, the different shades of colour must be as distinct from each other as possible: for instance, white should never be placed in contact with yellow, or deep blue with crimson; but white forms a good contrast with blue or red, blue to orange, yellow to purple or violet, dark crimson to light blue, and scarlet should be placed near those which have a profuse green foliage, as red and green form the best contrast. Orange and violet do well. Greenish-yellow and rose contrast well.

The only attention now required with such is to water freely, being careful it does not pass off; tie up, &c. Pinks and Carnations will require due care in securing, and by the middle of the month pipings of Pinks may be taken off, and towards the end layers of some early Carnations be made. Thin away extra flower-buds. Dahlias will require securing, and thin out the shoots, so as only to retain about four or five. Stop the leading stem, to give support to the side ones. Cuttings will soon strike root. If the weather be dry, water daily, a good supply at once: a portion of mulchy manure, spread over the roots, is very beneficial. Seeds of Sweet Williams, Canterbury Bells, Scabious, &c., should now be sown for next year's blooming. Auricula and Polyanthus must be kept in a shady but airy place. Prepare the compost for re-potting in next month. Sow seed as early as ripe. Pansey seed also sow. (See Articles on, &c.)

NEW FLOWERS.—Let attention be given to hybridizing, with a view to obtain improved varieties. Roses: maggots often infest the buds; carefully examine and destroy. Green-fly, tco, stop at first by fumigation, &c. (See Articles on.) Chrysanthemums: young plants should be prepared for the autumn. Violets for next year's blooming, attend to beds of, &c. (See Articles upon.)

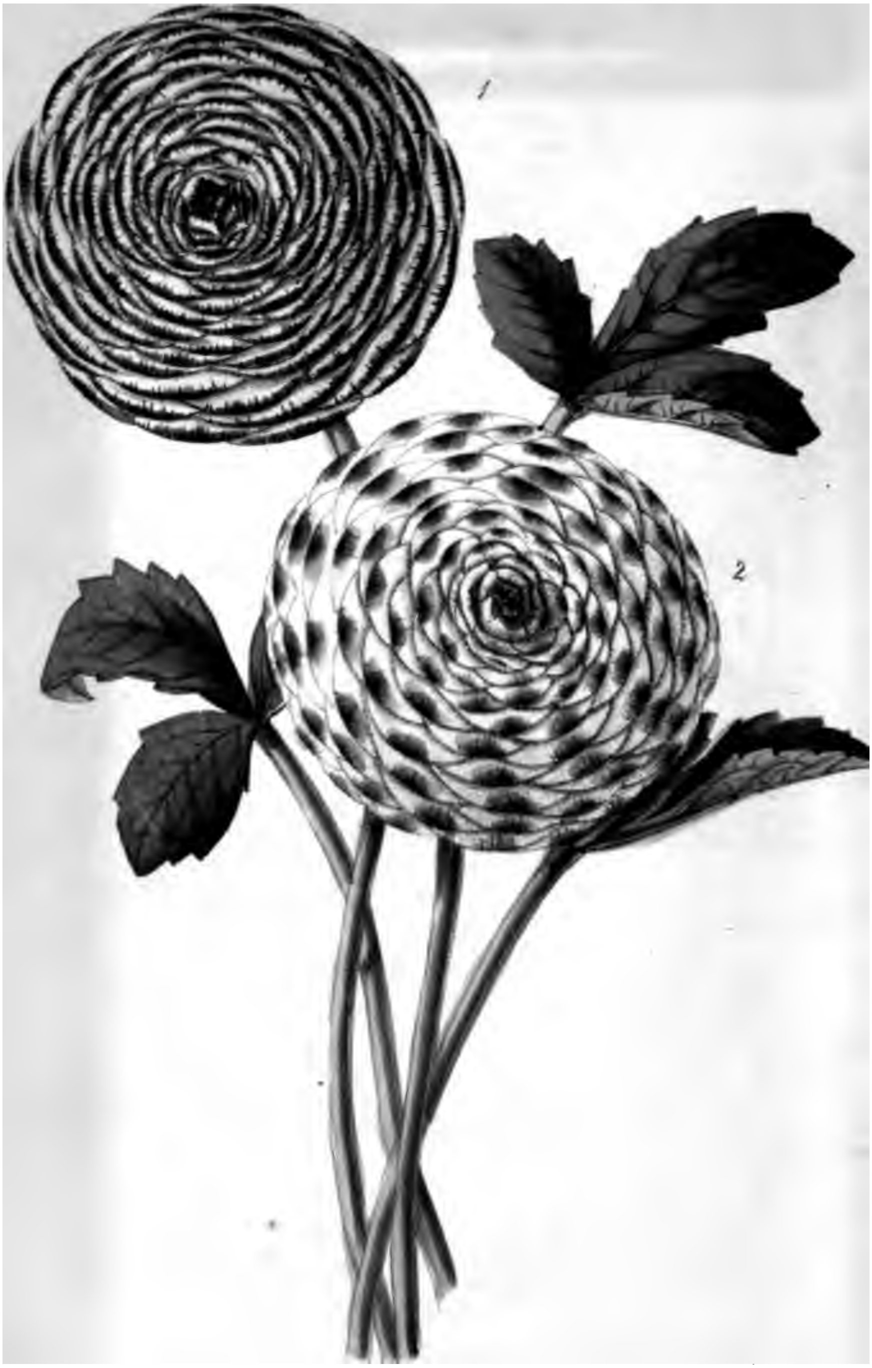
IN THE GREENHOUSE, &c.

The greenhouse plants which are placed out of doors will require to be duly watered, for if allowed to flag the result is the leaves are damaged. Moss sprinkled between the pots keeps the soil cool.

The house will now have to be kept gay and sweet by Balsams, Globe Amaranthus, Cockscombs, Brachycoma, &c. Re-pot as required, to keep the plants in a growing state. Achimenes will now be coming into bloom; they repay for every attention. Cuttings of nearly all greenhouse plants should now be put off: May and June are the best months for that purpose. Cinerarias are highly ornamental, and well worth encouraging. Any done blooming and seed collected, if required, should be turned out of the pots entire into a bed of rich soil, where there is shade from eleven to four o'clock. There they will flourish, and supply an increase for next year's bloom. Cuttings of Roses may be put in, and will soon strike. Camellias that have been forwarded by forcing the shoots and buds, should now be placed in a cooler situation, to give vigour to them. When the grass of Ranunculus or Tulips is quite dead, the roots may be taken up. Pelargoniums, as they go out of bloom, must be prepared for another season. (See Articles on, &c.)

Ericas.—The early-blooming kinds should be draughted out, and others may follow them as fast as they go out of bloom. Examine the plants very carefully, and see that they are in a proper state as to moisture ; and if you are an exhibitor, never put a plant of this or any other kind into a van without previously giving it a good soaking of water. The young plants which are not blooming had best be placed in a pit where they can be exposed or not, as may appear necessary. Stop such as require it boldly back, and train them so as to form a proper foundation for a good specimen. As the principal specimens go out of bloom they may be removed to a shaded situation to make their growth, being previously cut in, if necessary. Supports for an awning must be placed over them, so that in case of heavy storms or continued rain, they can be protected a little. Clear weak manure-water may be used occasionally for the free-growing kinds. With regard to ventilation, there is no fear of your over-doing it after this time. Re-pot any requiring it, but do not over-pot; the one-shift system is injurious to nearly all the tribe, the only exceptions are those of rapid growth and robust habit. Rough peat and silver-sand, with bits of stone, &c., and a liberal drainage, are requisites. Epacrises, &c., should also be duly attended to in re-potting, &c.

Azaleas in the forcing-pit must be kept shaded during bright sunshine, and a moist growing atmosphere must be maintained around them. Water freely with weak guano-water, and sprinkle the vacant parts of the house or pit daily, but not upon the bloom. As the plants go out of flower place them in heat, to perfect their wood for next year's blooming. (See Articles on in previous volumes.)



1. Ranunculus, Beauty of Fulham
2. Do. Admetus.

FLORICULTURAL CABINET

JULY, 1851.

ILLUSTRATIONS.

RANUNCULUSES—BEAUTY OF FULHAM AND ADMITTUS.

THESE very beautiful varieties are seedlings, raised by Mr. Theodore Lockhart, seedsman, Fleet-street, London, selected from an immense stock grown most successfully in his grounds, Parson's Green, Fulham.

We have frequently recommended to our readers the cultivation of this most lovely tribe of flowers. They are deserving every attention, and a collection ought to be in every flower-garden. Their cultivation is not difficult, as some persons have concluded, but by very simple, easy means, duly pursued. A very excellent article on the entire treatment is given in our Magazine for July 1849. We have this season seen the collections of several of the principal growers in the south of England, and the plants were universally healthy and in vigorous bloom. We again advise all who have flower-gardens to have a select collection, for when in bloom they compose the most delightful floral sights.

As the Ranunculus blooms early in the season, and the tubers are taken up in time to have the bed replanted with other flowering plants—as Scarlet Geraniums, Verbenas, and similar things—a double advantage in variety of floral display is afforded.

NOTES ON NEW OR RARE PLANTS.

Cattleya pallida.—Sepals and petals white, with a very slight tinge of sulphur; labellum, tube rose colour outside and yellow inside. Each blossom is about six inches across. It is a superb species. (Figured in *Paxton's Flower Garden*, 48.)

EPISCIA BICOLOR.—Mr. Purdie sent this pretty species from New Granada to the Royal Gardens of Kew, where, in the stove, it has bloomed very freely. It is a dwarf perennial herbaceous plant, with the habit of Gloxineas, Nepheas, &c., and thrives with similar treatment. The blossoms are Gloxinea-like; tube three-quarters of an inch long, and about the same across the five-parted expanded mouth. The tube is white, and the five divisions of the end (limb) a lilac-blue. (Figured in *Mag. of Bot.*)

ERICA LEEANA, var. VIRIDIS.—The flowers are green, tube about three-quarters of an inch long; they are produced a little below the ends of the branches, in whorls. It is a free-growing plant, and makes an interesting contrast with the flowers of other colours. (Figured in *Mag. of Bot.*)

FORSYTHIA VIRIDISSIMA.—Introduced by Mr. Fortune from China to the Horticultural Society. It is a branching shrub, grows six feet high, and flourishes trained against a wall, verandah, &c. Its profusion of bright yellow flowers, somewhat of the shape of the large yellow blooming Jasmine, but having a very short tube, are produced early in the spring, when the leaves are but partially expanded. It is well worth a place in every shrubbery or garden, and proves to be perfectly hardy. (Figured in *Bot. Mag.*, 4587.)

FRANCISCEA CALYCINA. (Syn. F. CONFERTIFLORA.)—This very superb species is a native of Brazil; a neat evergreen bushy shrub, grows freely and blooms profusely. Each flower is nearly two inches across; produced in cymes, of a rich *purple*, with a white ring around the mouth of the tube, but the flower soon changes to a pale purple, and then becomes almost white. It is a handsome plant, well deserving a place in every stove or good greenhouse; we find it do admirably in the latter, being showy, fragrant, and easy of cultivation. Small plants even bloom freely. (Figured in *Bot. Mag.*, 4583.)

IXORA JAVANICA.—It appears there are two different plants in this country bearing the above name, but Sir William Jackson Hooker states the one now figured, No. 4586, June number of *Magazine of Botany*, is the true I. Javanica. The drawing was taken from a plant which was introduced into this country by Messrs. Rollisson from Java. It is a shrub, smooth in every part, with compact branches, which are rounded, and the younger ones, at least, are of a rich *coral* colour. The flowers are borne in terminal large corymbs, on a long foot-stalk. The tube of each blossom is an inch and a half long, red; the limb (broad end of flower) is an inch across, of a deep orange-red colour.

PULTENÆA ERICOIDES.—Mr. Drummond sent this beautiful species from the Swan River colony, to Messrs. Henderson, of Pineapple Nursery. It is a dwarfish, compact, greenhouse shrub, having Heath-like foliage, and blooms very profusely. The flowers are produced in what appears to be *terminal* heads, but eventually a shoot proceeds from the centre. The blossoms are of the pea-formed order, each head having twenty or more of them. They are of a rich deep yellow, with the keel of a rosy-purple colour. Each blossom is about one-half of an inch across. It is a very neat, showy flowering plant, well deserving a place in every greenhouse, forming a charming spring and summer ornament. (Figured in *Mag. of Bot.*)

RANUNCULUS SPICATUS. SPIKE-FRUITED.—A native of Algiers, where it is common on the hills. The flower-stems rise a foot high, each having from four to six blossoms, of a bright glossy yellow colour, with an *orange-coloured* spot at the base of each petal. The flower is two inches across, very showy. It is a hardy herbaceous perennial plant, growing freely in the usual soil of a garden, and commences blooming in April, being very ornamental. (Figured in *Bot. Mag.*, 4585.)

SALVIA GESNERIFLORA.—This exceedingly rich, ornamental flowering species is figured in the June number of *Paxton's Flower Garden.* We figured it four years ago, and then, as well as often since, we have recommended the plant to our readers. It is a noble species for the greenhouse, blooming all through winter, and its *large* spikes of *large* blossoms, of a fine scarlet colour, render it highly ornamental. It deserves to be grown in every conservatory, greenhouse, dwelling-room window, or pit-frame.

SEEDLING NARCISSUS.—Edward Leeds, Esq., of St. Ann's, Manchester, has for many years been engaged in raising hybrids of this pretty tribe of flowers, and has been successful in obtaining many beautiful distinct varieties. Three of them are figured in the *Magazine of Botany.* 1. Narcissus poculiform elegans; the flowers large, each four inches across, of a creamy-white, the centre cup of a nankeen colour. 2. N. Leedsii; flowers large, of a fine yellow, the cup of a much deeper yellow, with a margin of bright orange-red. 3. N. superbus; flowers very deep yellow, with a *large bell-shaped* cup, which is plaited at its margin. They are charming varieties, well remunerating Mr. Leeds for the interesting pursuit and attention.

THE PROGRESS OF THE PELARGONIUM.

(*Continued from page* 127.)

BY ORION.

TAKING 1836 as the starting point, it will perhaps be as well to notice briefly those varieties which were known and in cultivation previously; and in doing this the writer hopes that he may be excused if, in giving dates, he should occasionally err, as it may perchance happen that the memorandums from which these remarks are taken may have been originally erroneous. The first to be named is the old (and as yet unrivalled for freedom of bloom) ALBA MULTIFLORA, which at the present time forms the chief ornament of many a cottage window, and is one of those still sold early in the spring by hawkers, &c., as it is also an admirable one for forcing. ADMIRAL NAPIER is a fitting companion to the preceding *white* variety, being of a *bright pink* colour, and is also a very free bloomer. These two seem to keep up their popularity even now; the writer was passing a cottage the other day, and seeing the window entirely filled with a plant of each was induced to ask for a specimen of their flowers; the favour (for it was considered an especial one, so highly were they prized,) was granted with some reluctance, but an application for a cutting was rejected, though a plant of a superior variety was offered in exchange. But to resume the list: SMUT, BANCHO, and HABRANTHUM were figured in this work for 1835, as stated in the last article; they were sent out by Mr. Dennis, of Chelsea, but obtained very little circulation. Not so the varieties WASHINGTON, DAVEYANUM, MOORE'S VICTORY, and YEATMANIANUM; these were in general request, and considered gems in their day. NOSEGAY, LADY DENBIGH, CURATE, CUPID, and the renowned DIADEMATUM will suffice to complete the list. Those who are able to remember so far back will recollect that most of those named above were very inferior flowers—bad shapes, flimsy petals, and with very uncertain colouring.

In 1836 we find that Mr. Dennis raised and first advertised his PERFECTION; this was a great step in the right direction; it was sold at two guineas per plant, which was not high then. The flower was similar to GAINES' KING, or RISING SUN, but had more violet about it. Gaines this year also raised and sent out his SIR JOHN BROUGHTON, which was a popular flower for some time; it was also priced at two guineas, as was HILL'S DIOMEDE, a flower with dark-veined petals. These were the only celebrities of any account which require notice at the present time.

The year 1837 was remarkable, as a gentleman very much devoted to this flower (first?) appeared with some decided novelties; this was Edward Foster, Esq., who has since contributed so many *notoriously fine flowers*, and too much praise cannot be awarded that gentleman for his long and valuable services. He is *now* as celebrated as when he *first* appeared, though many other raisers have attempted to rival him, and "fell to pass away." ALECIA was his crack flower of this year, and advertised at three pounds; it was then a fine light flower. His ELIZA, IANTHA, LELIA, and LADY NITHSDALE, each two guineas, were not esteemed so long, but were still good acquisitions. COUNTESS OF JERSEY attracted some attention for a time, but her beauty soon faded; this variety was raised by Mr. Blackford, of Jersey, and also priced two guineas. Mr. Lound raised his BRIDE, CRITERION, and the celebrated CHEF-D'ŒUVRE at this time. Gaines sent out his RIENZI at one guinea; ALUSIDORA, BELLISSIMA, and BEAUTY OF WARE were also *then* "worthy of notice," but, like many more "departed worthies," their fame is forgotten *now*. Beauty of Ware was raised by a gentleman of that town with whom the writer was acquainted, and he was a good instance of an *enthusiast* in the cause, but, like many other careful raisers, only fortunate once or so in their lives at getting a grand prize.

Before proceeding to the year 1838, it will not be out of place to give a slight account of the *letting out* of this period. There were then only three nurserymen who devoted much attention to this flower, viz., Mr. Catleugh of Chelsea, Mr. Dennis of the King's-road, and Mr. Gaines of Battersea. The first and last named were keen competitors at the grand shows, and amongst gardeners it created as much interest as to who should be first, GAINES or CATLEUGH, as who should be winner of the DERBY amongst the sporting world. Mr. Catleugh was then the more fortunate generally, but he was afterwards often well beaten by his rival. Mr. Dennis usually came off *content* with the third place. Now the principal seedling raisers at this time were Mr. Foster, as above mentioned, and the Rev. Mr. Garth, between whom there was as much (loving) rivalry as the "great exhibitors," as they used to be called. But the system of exhibiting seedlings for prizes had not been adopted, and, generally speaking, nothing was known of the qualities of a new flower beyond the recommendation of the raiser or advertiser. Mr. Catleugh, from his extensive business and large connections, was usually the party who had the *letting out* the new varieties, but it was not done *then* as *now*. The novelties were put at high prices in the spring catalogues, but few were sold until the autumn, when reduced prices were taken. The general plan was to take notice of the best varieties, and wait until the increase of the stock enabled the growers to sell cheaper. Many now say the trade is gone, but the contrary is the case; plants are now advertised at one guinea and one pound ten shillings and sixpence, and, if very good, as much as two guineas is asked, and actually given. But it is very much questioned whether plants advertised at five guineas, as was GAINES' KING, LOUND'S PERFECTION, CONSERVATIVE, RISING SUN, and many others, actually met with a sale at those high prices; and it is a well known fact that such is the demand now for the good and *often-exhibited* novelties, that advertisements not unfrequently appear to say that "such and such a variety cannot be supplied any more this season." This fact does not indicate that indifference to novelties as would appear if the remarks from *certain quarters* were to be believed; far from it—the *legitimate taste* is not to be driven out by any *fancy* or running down it may receive from persons whose will or say is not always to be received for law.

The year 1838 was distinguished by two *five-guinea* varieties appearing—GAINES' KING and LOUND'S PERFECTION, the former being *in every respect a good thing;* indeed it is *now* in many collections, and until very lately, when SALAMANDER took its place, has been found on the exhibition tables. This year, too, a handsome striped variety appeared, called SIDONIA; it is grown now in some *fancy* collections. The Rev. Mr. Garth raised CLIMAX, two guineas; FOSTERI ROSEA, two guineas; INVINCIBLE, three guineas; NULLI SECUNDUS, two guineas; and QUEEN MAB, two guineas; while Mr. Foster's ADELA, thirty shillings; BLEDA, thirty shillings; FAUNUS, two guineas; NIOBE, two guineas; and ORANGE QUEEN, two guineas, divided attention with them. ALEXANDRINA, a nice clear white, appeared too at the moderate price of one guinea, and only gave place to ANNETTE some time after. Such were the principal novelties which appeared during the year 1838.

REMARKS ON THE INDIGENOUS ROSES OF AMERICA, &c.

BY AN ARDENT ADMIRER.

In a recent number of this Magazine, I observed some observations upon an American Rose, discovered by a female, and named the Maanga Rose. Having seen in an American publication, some extended remarks on the national (indigenous) roses of that portion of the world, I have transcribed a few short particulars of some of the most beautiful:—

"North America: there, in the glaciers of the most northerly provinces, grows the Rosa blanda, which unfolds its bright pink corolla, always solitary on the stem, immediately on the melting of the snows. This shrub is peculiar to the frozen deserts between 70° and 75° N. latitude. Within the polar circle, on the shores of the Hudson, is found the Rosa rapa, or Hudsoniana, covered during spring with clusters of double flowers of a pale colour. Newfoundland and Labrador possess, in addition to the two species above named, the Rosa fraxinifolia, or ash-leaved rose, a small red blossom with heart-shaped petals; the Rosa nitida, the small cup-shaped, deep red flowers and fruit of which abound under the stunted shrubs dispersed over the coasts. The Esquimaux are fond of decorating their hair, and the seal-skins and skins of rein-deer in which they are clothed, with these beautiful blossoms.

"The United States, and adjacent Indian settlements, possess a great variety of roses, of which a few striking species may be enumerated. In the marshes of Carolina grows the Rosa lucida, the bright clusters of which rise above the reeds and rushes; beside the waves of the Missouri, the Rosa Woodsii; and in the adjoining marshes, the Rosa Carolina, and Rosa Evratina, whose double flowers of a pale pink, perish if transplanted to garden ground from the marshy banks of the rivulets of Virginia, of which the shrub is a native.

"Quitting the borders of streams and marshy savannahs, there is in the forests and stony districts the Rosa diffusa, of which the pink flowers blossom in pairs early in the summer. On the rising grounds of Pennsylvania, grows the Rosa parviflora, a diminutive shrub, of which the small, half-blown, elegant double flowers, slightly tinged with the most delicate pink, constitute one of the most beautiful species of North America, but extremely difficult of culture and propagation. On the outskirts of the Pennsylvanian forests, grows the Rosa stricta, with flowers of a pale red; the Rosa rubifolia, flowers small, pale red, and flowering in clusters of three; and, in South Carolina, the Rosa setigera, the petals of whose red blossoms are shaped like a reversed heart. The Creoles of Georgia adorn their hair with the large white blossoms of the Rosa lævigata, a climbing plant, whose long tendrils are found interlaced among the most majestic forest trees.

"The last Rose adorning the Flora of America, is the Rosa Montezuma; sweet-scented, of a pale pink, solitary and thornless. This shrub abounds on the most elevated heights of Cerro Ventoso, near San Pedro, in Mexico, where it was discovered by Messieurs Humboldt and Bonpland. The town of San Pedro is situated in 19° of latitude; in direct refutation of those botanists who pretend that Roses are not to be found under 20°. But the Montezuma is not the only Mexican Rose. History attests that Roses were abundant in the province, at the Spanish conquest; witness the apostrophe of the Emperor Guatimozin to his favourite minister, when extended on beds of burning coal, intended by the conquerors to torture them into the discovery of their hidden treasures.

"But though the species already cited are the only ones we are at present authorized to attribute to America, it is probable that more will be discovered; the greatest variety of Roses being assigned by botanists to such countries as have been most minutely herborized. The insufficiency of our researches, is probably the only cause that so large a portion of the American continent is held to be unproductive of Roses. It seems unlikely, indeed, that France should possess twenty-four species of native Roses, and the whole continent of North and South America, only fourteen; nor is it to be credited that the Rose-tree ceases to flourish within the 20° of latitude, when we remember that we are indebted to Mr. Salt for the discovery of a strongly characterized species of Abyssinia, at 10° of latitude.

"It is a curious fact, that all the Roses of America, with the exception of the Montezuma and stricta, might be classed under the same species as the European cinnamon Rose.

"Asia has to boast a greater variety of species of the rose than the rest of the earth united; thirty-nine, that admit of accurate definition, having been already established. Of these the vast empire of China, where both agriculture and horticulture are arts in high estimation, has a claim to fifteen.

"First, the Rosa semperflorens, the leaves of which have sometimes three leaflets, sometimes only one; whose flowers are scentless, of a pale dull pink, producing a pleasing effect when half-blown. The Rosa sinensis, confounded by some botanists with the preceding, but blowing at all seasons, of a far more brilliant colour. The Rosa Lawranceana is a beautiful little shrub, from three to five inches in height, but, unlike most dwarfs, whether of the vegetable or animal creation, perfect in symmetry and proportion. The Rosa multiflora attains, on the contrary, a growth of fifteen or sixteen feet; having small, double, pale-pink blossoms, united on a single stem, so as to form beautiful bouquets on the tree. The Rosa Banksiæ extends its flexile branches over rocks and hillocks, bearing a profusion of small, very double, yellowish white flowers, remarkable for their violet-scented fragrance. The Rosa microphylla is a favourite garden-shrub of the Chinese, under the name of Haitong-hong; having small, double, pale-pink flowers, and a foliage of peculiar delicacy.

"Cochin China, situated between the tenth and twentieth degrees of latitude, possesses all the roses of China, and in addition, several indigenous species; among others the Rosa alba, found also in Piedmont, in France, and various other parts of Europe, and the Rosa spinosissima, bearing flesh-coloured flowers. Japan, between the 30° and 40° of latitude, has all the roses of China; besides a peculiar species, the Rosa rugosa, the solitary flower of which bears some resemblance to the Kamschatkan rose.

"The southern provinces of Asia, comprehending those of India, offer many curious species to our observation. The north of Hindostan possesses six; two of which are also found in China, and two in Nepaul. The Rosa Lyellii, which bears transplantation to our own climate, and is remarkable for the profusion of its milk-white flowers during the greater part of the summer; and the Rosa Brunonii, whose petals are of the same snowy whiteness, rank high among the Roses of India. In approaching the southern provinces, we find the Rosa macrophylla, somewhat resembling the Alpine Roses of Europe; the flowers whitish, but streaked with pink towards the extremity of the petals; the Rosa sericea, of which the surface of the leaflets has a satin texture, and the flowers are solitary and drooping.

"The parched shores of the Gulf of Bengal are covered, during the spring, with a beautiful white rose found also in China and Nepaul. The flowers of the Rosa involucrata are white, solitary, surrounded with a collar of three or four leaves, out of which they seem to emerge; while in vast thickets of the beautiful Rosa semperflorens, (a native also of China,) the tigers of Bengal and crocodiles of the Ganges are known to lie in wait for their prey.

"In the gardens of Kandahar, Samarcand, and Ispahan, the Rosa arborea is cultivated in great profusion by the Persians. This shrub, which attains a considerable size, is covered during the spring with an abundance of white and scented blossoms. The Rosa berberifolia is also common in these provinces. This shrub, differing so completely from every other species of rose, that botanists experience some hesitation in classing it among the number, has simple single leaves, and yellow star-shaped flowers, variegated like a cistus at the base, with spots of deep crimson. The Rosa Damascena, transported to Europe from Damascus, by the Crusaders, affording to our gardens an infinite number of beautiful varieties, adorns the sandy deserts of Syria with its sweet and brightly tinted flowers. At the extremity of Asia, towards Constantinople, the Rosa sulphurea displays its very double flowers of a brilliant yellow.

"The north-west of Asia, which has been signalized as the fatherland of the Rose-tree, introduces to our admiration the Rosa centifolia, the most esteemed of all, and celebrated by poets of every age and country, with which the fair Georgians and Circassians adorn their persons. The Rosa ferox mingles its large red blossoms and thorny branches with those of the hundred-leaved; and the Rosa pulverulenta is also observed on the peak of Narzana, one of the Caucasian chain.

"In the north of Asia, Siberia boasts the Rosa grandiflora, of which the corolla bears the form of an antique cup; the Rosa Caucasea, the fruit of which is of a pulpy substance; and, still adjoining the Caucasian provinces, we find a yellowish variety of the Caucasea, of a dingy, unattractive appearance. Advancing towards the Frozen Ocean, and beyond the Ural Mountains, grows the Rosa rubella, of which the petals are sometimes of a deep crimson, but often pale and colourless as the surrounding country. Still further north, flourishes the Rosa acicularis, bearing solitary flowers of pale red. Ten or twelve other species grow in the Russian provinces of northern Asia; in particular, the Rosa Kamschatica, bearing solitary flowers of a pinkish white.

"In Africa, on the borders of the vast desert of Sahara, and more especially in the plains towards Tunis, is found the Rosa moschata, whose tufts of white roses give out a musky exhalation. This charming species is also to be found in Egypt, Morocco, Mogadore, and the Island of Madeira. In Egypt, too, grows the Rosa canina, or dog Rose, so common throughout Europe. In Abyssinia, we find an evergreen Rose-tree with pink blossoms, which bears the name of the country, as the Rosa Abyssinica. Other species are, doubtless, to be found in the unexplored countries of Africa.

"In Europe, commencing to the north-west with Iceland, (so infertile in vegetation, that in some parts the natives are compelled to feed their horses, sheep, and oxen on dried fish,) we find the Rosa rubiginosa, with pale solitary, cup-shaped flowers. In Lapland, blooming almost under the snows of that severe climate, grows the Rosa Maialis, small, sweet, and of a brilliant colour; and the same beautiful species, as if in enlivenment of the cheerless rudeness of the climate, is to be found in Norway, Denmark, and Sweden. In Lapland, too, under shelter of the scrubby evergreens, among which the natives seek mosses and lichens for the nourishment of their rein-deer, they find the Rosa rubella, already mentioned, the flowers of which are sometimes of a deep red colour.

"The Rosa rubiginosa, the pale flowers of which grow in clusters of two or three; the May Rose, the Cinnamon Rose, the small pale red flowers of which are sometimes single, sometimes double; as well as several other hardy species, may be found in all the countries of northern Europe.

"Six species are indigenous in England. The Rosa involuta exhibits its dark foliage and large white or red flowers amid the forests of North Britain, the leaves of which, when rubbed, giving out a smell of turpentine, as if derived from the pine-trees among which the shrub takes root. In the same neighbourhood is found the Rosa Sabini, the Rosa villosa, the flowers sometimes white, sometimes crimson, blowing in pairs; and the Rosa canina.

"The environs of Belfast produce an insignificant shrub, known as the Rosa Hibernica, for the discovery of which Mr. Templeton received a premium of fifty guineas from the Botanical Society of Dublin, as being a new indigenous plant; though since discovered to become the Rosa spinosissima in poor soils, and the Rosa canina in loamy land.

"Germany, though unproductive in Rose trees, boasts of several highly curious species. Among others, the Rosa turbinata, of which the very double flowers spring from an ovary in the form of a crest: and the Rosa arvensis, with large flowers, red and double, in a state of cultivation.

"The Swiss mountains, and the Alpine chain in general, are rich in native Roses. Besides the field Rose, just mentioned, they have the

Rosa Alpina, an elegant shrub, with red solitary flowers, furnishing many varieties in cultivation; the Rosa spinulifolia, having pale pink flowers of moderate size, with thorny leaflets that exhale a scent of turpentine. It is remarkable that two mountain roses, the Swiss spinulifolia, and the Scottish Rosa involuta, should be thus alike characterized by the smell of turpentine. There remains to be cited among Alpine Roses, the Rosa rubrifolia, of which the red-tinted stems and leaves, as well as the pretty little blossoms of a deep crimson, form an agreeable variety to the verdure of the surrounding foliage.

" In the eastern and southern countries of Europe, Rose-trees abound; of which a considerable number remain to be examined and classed. The Crimea, for instance, is not acknowledged to afford a single species, though travellers describe the country as very productive in roses. In Greece and Sicily we find the Rosa glutinosa, of which the leaflets produce a viscous matter: the flowers being small, solitary, and of a pale red. Italy and Spain has several distinct species; among others, the Rosa Polliniana, with fine, large, purple flowers, growing in clusters of two or three, and found in the neighbourhood of Verona. The Rosa moschata and Rosa Hispanica flourish in Spain; the flowers, of a light pink colour, appear in May. The Rosa sempervirens, common in the Balearic Islands, grows spontaneously throughout the south of Europe and in Barbary. Its foliage of glossy green, is intermingled with a profusion of small, white, highly scented flowers.

" For France, nineteen species are claimed by the Flora of De Candolle. In the southern provinces is found the Rosa eglanteria, whose golden petals are sometimes varied into a rich orange. The Rosa spinosissima grows in the sandy plains of the southern provinces, having white flowers tipped with yellow, which have furnished many beautiful varieties. In the forests of Auvergne and the departments of the Vosges, we find the Rosa cinnamomea, which derives its name from the colour of its branches; the flowers being small, red, and solitary. The Rosa parvifolia, or Champagne Rose, a beautiful miniature shrub, adorns the fertile valleys in the neighbourhood of Dijon, with its very double, but small, solitary, crimson blossoms. The Rosa Gallica is one which has afforded varieties of every hue; more especially the kind known as Provins Roses, white, pink, or crimson. In the eastern Pyrenees, grows the Rosa moschata, a beautiful variety of which is known in our gardens as the Nutmeg Rose. The Rosa alba is found in the hedges and thickets of various departments; as well as the Rosa canina, or eglantine, the stock of which, straight, elegant, and vigorous, is so valuable for grafting."

BRIEF REMARKS.

HORTICULTURAL SOCIETY, HELD IN THE CHISWICK GARDENS, JUNE 7TH.—This was the second exhibition held there this season, and the plants, &c., shown were of the most superb character; there were, of course, various degrees of excellence in them, but we did not see a poor specimen in the whole.

Pelargoniums were shown in excellent condition, and in tolerable abundance. Mr. Gaines, of Battersea, obtained the first prize for twelve plants in eight-inch pots. The sorts were: Duchess of Argyll, Aspasia, Prince of Orange, Negress, Mont Blanc, Rosamond, Mars, Salamander, Centurion, Painted Lady, Firebrand, and Star. A second prize was awarded to Mr. Bragg, of Slough, for Forget-me-not, Roseum elegans, Star, Ariel, Norah, Narcissus, Victory, Gulielma, Nepaulese Prince, Conspicuum, Knight of Avenal, Lord Gough. Nine plants in 11-inch pots; 1st, Mr. Chapman, Turnham-green, for Negress, Luna, Duke of Cornwall, Camilla, Emperor, Rosy Circle, Forget-me-not, Salamander, Adonis; 2nd. Mr. Gaines, for Mars, Aspasia, Negress, Rosamond, Marion, Orion, Xarifa, Chieftain, Gulielma.

Fancy Pelargoniums.—1st prize to Mr. Ambrose, of Battersea, for Defiance, Reine des Francais, Formosum, Cleopatra, Fairy Queen, and Modestum; 2nd. Mr. Gaines, for Hero of Surrey, Madame Rosatti, Orestes, Reine des Francais, Odoratum, Magnificum, and Lady St. Germans; 3rd. Mr. E. G. Henderson, Wellington Road, for Mrs. Loudon, Alboni, Annette, Prima Donna, Victoria, Princess Maria, and Galitzin; 4th. Mr. Bragg, of Slough.

Cape Pelargoniums were exhibited by Mr. Parker, gardener to J. M. Strachan, Esq., of Teddington, and Mr. Stanly, gardener to H. Berens, Esq., Sidcup, Kent. The sorts were tricolor, flexuosum, glaucifolium, glaucum, Blandfordianum, quinquevulnerum, ardens, bicolor, and elatum.

In collections of 20 *Stove* and *Greenhouse Plants*, the first prize was awarded to Mr. May, gardener to Mrs. Lawrence, of Ealing-park, for a group whose excellence has never before been approached, even in England itself. It contained a specimen of Polygala acuminata, quite seven feet in diameter, beautifully flowered, round and well-proportioned; another, equally large and fine, of Pimelea spectabilis, which was the admiration of everybody. This was literally one mass of white, fresh, and beautiful flowers. These were in wooden tubs, the largest sized pots being too small for them. Associated with them were the rosy-flowered Pimelea Hendersoni, an admirable specimen of a somewhat slow-growing plant. Eriostemon buxifolium, rather past the best; Erica tricolor rubra, wonderfully fine; Pimelea decussata; Azalea variegata; two of the best varieties of Aphelexis; Chorozema Henchmanni; the graceful Coleonema rubrum; Leschenaultia formosa, and the blue variety; the Cavendish Heath; the glowing Azalea magnifica; the exceedingly handsome Dipladenia crassinoda, beautifully flowered; the Scarlet Ixora, and a large and finely managed Epacris grandiflora. The second prize was awarded to Mr. Cole, gardener to H. Colyer, Esq., of Dartford, for an exhibition of finely grown plants. It comprised Polygala cordifolia; Pimelea decussata, a finely blossomed Stephanotis floribunda; Dipladenia splendens, with three clusters of glorious flowers; the Gledstane Azalea, three Everlastings; a handsome Pimelea Hendersoni; the Cavendish Heath; an Azalea, composed of lateritia, Gledstanesi, and variegata, all worked together on one stem, the different colours effecting a charming contrast; the Scarlet Ixora, beautifully bloomed; a well-cultivated Franciscea acuminata; Sphenotoma gracilis, a useful plant for cutting from; Leschenaultia formosa, the showy Rondeletia, a variety of the Three-coloured Heath, and Eriostemon cuspidatum. A third group was contributed by Messrs. Fraser, of Lea-bridge. It consisted of Epacris grandiflora, the showy Clerodendron Kæmpferi, bearing two great panicles of flowers; Polygala acuminata, the handsome Azalea præstantissima, Erica perspicua nana profusely bloomed, Coleonema rubrum, the Saffron Ixora, the Box-leaved Eriostemon, the yellow-blossomed Hibbertia Cunninghami, the Blue Leschenault, Pimelea Hendersoni, the Cavendish Heath, Chorozema varium nanum, Azalea variegata, an Everlasting, the Scarlet Ixora, Boronia serrulata, the snowy white-flowered Sphenotoma gracilis, and Pimelea decussata. Mr. Stanly, gardener to H. Berens, Esq., of Sidcup, Kent, communicated Zichya inophylla, a white Azalea, Leschenaultia formosa, the purple-blossomed Chironia glutinosa, Erica Cavendishii, the sweet-smelling Stephanotis floribunda, the Large-flowered Epacris, Clerodendron Kæmpferi, the White Vinca, the free flowering Erica perspicua nana, Polygala oppositifolia, and one of the best varieties of Aphelexis. Mr. Pamplin, of Lea-bridge-road, sent a fifth group, in which were Erica Bergiana, profusely clothed with little purple bells; the Box-leaved Eriostemon, the Cavendish Heath, Polygala oppositifolia, an Everlasting, Rhynchospermum jasminoides, the brilliant Epacris miniata, Pimelea lanata, Gompholobium polymorphum, trained in the form of a bush, and a fine Eutaxia myrtifolia.

In collections of fifteen *Stove* and *Greenhouse Plants*, the first prize was awarded to Mr. Green, gardener to Sir E. Antrobus, Bart., of Cheam. In this group we remarked well-managed plants of Ixora coccinea; the clear yellow-flowered Allamanda grandiflora, the Opposite-leaved Polygala, Rondeletia speciosa, the variegated Azalea, Baronia serrulata, the beautiful variety of Erica tricolor, called Wilsoni, the blue and red Leschenaults, an Everlasting, Chorozema varium nanum, the neat rosy-flowered Adenandra fragrans, the Cavendish Heath, and Polygala Dalmaisiana.—Mr. Carson, gardener to W. F. G. Farmer, Esq., of Cheam, sent the next best group, in which were the Variegated Azalea, a finely managed Stephanotis floribunda, Allamanda cathartica, the Fortune Gardenia, splendidly flowered, and exceedingly beautiful; an admirable Ixora coccinea, Franciscea acuminata, a neat Leschenaultia formosa, Dipladenia crassinoda, trained on a globular wire trellis; a good variety of Everlasting, the Baxter Leschenault, Polygala acuminata, the sweet-smelling Sphenotoma gracilis, a pretty rosy Azalea, called Bella, the Anemone-leaved Boronia, and Polygala Dalmaisiana.—A third group was furnished by Mr. Taylor, gardener to J. Coster, Esq., of Streatham. It consisted of Pimelea decussata, the large-flowered variety of Aphelexis spectabilis, Sphenotoma gracilis, the Cavendish Heath, Azalea formosa elegans, the beautiful Boronia pinnata, the fragrant Stephanotis floribunda, very full of bloom; Leschenaultia formosa, the Opposite-leaved Polygala, the variety of Erica tricolor, called Dumosa, Allamanda cathartica, the Henderson Pimelea, Azalea variegata, an Everlasting, and a charming example of the Saffron Ixora.

Ten *Stove* and *Greenhouse Plants* were furnished by Mr. Speed, of Edmonton, and Mr. Croxford, gardener to H. Barnes, Esq., of Stamford Hill; they were beautifully grown from seeds consisting of a lovely Dipladenia crassinoda, a well-flowered Clerodendron fallax, Stephanotis floribunda, Coleonema rubrum, the White Vinca, the Violet-flowered Tetratheca verticillata, the purple Chironia glutinosa, two charmingly managed Cape Heaths, and Cyrtoceras reflexum.—Mr. Croxford had a very nice Stephanotis floribunda, Epacris grandiflora, Crowea saligna, insufficiently advanced in flower; Polygala acuminata, the brilliant Epacris miniata, two Everlastings, the Cavendish Heath, Pimelea Hendersonii, and the Swan River Chorozema varium.

In the class of six *Stove* and *Greenhouse Plants* there were five exhibitors, all of whom produced creditable collections. The first was furnished by Mr. Kinghorn, gardener to the Earl of Kilmorey, who sent Aphelexis humilis; an admirable bush of Azalea Gledstanesi and lateritia, "worked" together; an excellent variety of Epacris miniata, the blue Leschenault, a large Pimelea decussata, and a beautifully blossomed Erica perspicua nana.—Mr. Watson, gardener to Mrs. Tredwell, who was second, had Hoya carnosa, Stephanotis floribunda, the useful Justicia carnea, the violet Tetratheca verticillata, Pimelea decussata, and Polygala Dalmaisiana.—A third group from Mr. Hamp, gardener to J. Thorne, Esq., consisted of the Red Coleonema, Pimelea decussata, the useful Sphenotoma gracilis, an Everlasting Polygala cordifolia, and Acrophylla venosum.—Mr. Stuart, gardener to T. Huggins, Esq., of Norwood, produced Pimelea Hendersonii, the purple variety of Aphelexis macrantha, Erica depressa, Polygala Dalmaisiana, Aotus linophylla, rather a pretty plant, and Pimelea decussata.—From Mr. Williams, gardener to C. B. Warner, Esq., came Aphelexis splendens, the free-flowering Erica ventricosa coccinea minor, the Opposite-leaved Polygala, a neat well flowered plant of the Fortune Gardenia, with large white waxy blossoms just in perfection; the showy Azalea fulgens, and Boronia serrulata.

Orchideous Plants.—First, Mr. Mylam, gardener to S. Rucker, Esq. It consisted of Odontoglossum citrosmum, finely flowered and wonderfully coloured; a nice bush of the Purple Camarote, the Sweet Vanda, the Large-flowered Butterfly plant (Phalænopsis grandiflora), the brown Oncidium crispum, in fine condition; Aerides virens and crispum, Anguloa uniflora, quite a mass of white flowers; small plants of the purple Saccolabium ampullaceum and the singular-looking Odontoglossum niveum; Chysis bractescens, Lycaste Deppei, beautifully blossomed; the rare Dendrobium Dalhousieanum, the curious rather than beautiful Cœlogyne Lowii, the Three-coloured Vanda, the showy Moss Cattleya, the yellow-flowered Anguloa Clowesii, and the curious green-blossomed Cycnoches chlorochilum.—The second prize was awarded to Mr. Blake, gardener to J. H. Schröder, Esq., of Stratford, for a splendid specimen of Phalænopsis, quite a mass of lovely blossoms; Oncidium ampliatum, finely flowered; the charming Dendrobium Devonianum; the Clowes Anguloa; a variety of the Aromatic Lycaste; Aerides affine and crispum; a large plant of Dendrobium sanguinolentum; the Bearded Lady's Slipper, the beautiful Epidendrum cinnabarinum, the Three-coloured Vanda, Dendrobium chrysanthum, Onchidium Papilio, the snowy white Calanthe veratrifolia, Schomburgkia tibicinis, Vanda cristata, and Epidendrum cochleatum. —Mr. Franklin, gardener to Mrs. Lawrence, obtained a third prize for a charmingly-flowered example of the Moss Cattleya, Oncidium flexuosum, beautifully managed; a Phalænopsis; the Roxburgh Vanda; the Twisted Trichopil; Vanda teres; the Clowes Anguloa, bearing four large clear yellow flowers; Sobralia macrantha, with seven large purple blossoms; the orange Epidendrum vitellinum, Acineta Humboldti, in beautiful condition; Epidendrum crassifolium, the handsome Odontoglossum hastilabium, the Long-tailed Angrec, Brassia Wrayæ, the rare and beautiful Cattleya Aclandiæ, Stanhopea oculata, and a highly-coloured Vanda tricolor.—Mr. Williams, gardener to C. B. Warner, Esq., of Hoddesdon, had a well-managed example of Dendrobium Pierardi major, Aerides odoratum, the singular Oncidium phymatochilum, Cœlogyne Lowii, the charming Saccolabium guttatum, a Phalænopsis, a variety of Aerides crispum, the African Ansellia, a neat bush of Dendrobium cærulescens, a variety of Vanda Roxburghi, Brassia verrucosa, one or two Aerides, the Bearded Lady's Slipper, and a few other plants.

In the Nurseryman's Class of fifteen *Orchids*, Messrs. Veitch and Rollisson produced collections. The former sent Sobralia macrantha, with ten large flowers on it; a beautifully blossomed Oncidium sphacelatum; the noble and close-flowered Dendrobes; Calanthe veratrifolia, with nine flower spikes; Saccolabium præmorsum, in charming condition; three species of Aerides, the Moss Cattleya, Cypripedium barbatum, Brassia caudata, and the white Butterfly plant (Phalænopsis).—Messrs. Rollisson had a spreading Oncidium sphacelatum, Brassia verrucosa, beautifully flowered; the white, yellow-stained, Dendrobium formosum, the Moss Cattleya, Saccolabium guttatum, the Twisted Trichopil, Saccolabium præmorsum, Miltonia spectabilis, a small plant of Burlingtonia venusta, Aerides odoratum, Stanhopea oculata, the white Butterfly plant, Sobralia macrantha, and the Dalhousie Dendrobe.

Collections of ten *Orchids* were contributed by Mr. Carson, gardener to W. F. G. Farmer, Esq., and Mr. Wooley, gardener to H. B. Ker, Esq. Mr. Carson sent Acineti Humboldti in a square wire basket, producing eight flower spikes; Oncidium flexuosum, one of the best of the small brown and yellow flowered kinds; Brassia brachiata and verrucosa, the Bearded Lady's Slipper, the Spotted Saccolabe, with five nice flower spikes, Anguloa Clowesi, insufficiently in flower, Aerides crispum, the purple Epidendrum phœniceum, and a finely flowered Moss Cattleya.—Mr. Wooley produced the Aloe-leaved Cymbid; a small example of Dendrobium Farmeri; Sobralia macrantha, with three open flowers on it; Peristeria elata, beautifully blossomed; the Brazilian Oncidium flexuosum, Epidendrum crassifolium, the spotted Saccolabe, the Moss and Forbes Cattleyas, the latter in lovely condition, and Vanda Roxburghi.

Groups of six *Orchids* were communicated by Messrs. Kinghorn, Ivison, and Green. The former had the white Butterfly plant, bearing a spike of flowers upwards of two feet in length, the larger variety of

Oncidium ampliatum, charmingly blossomed, Calanthe veratrifolia, producing six flower spikes, the Intermediate and Forbes' Cattleyas, and a neat Dendrobium cærulescens. Mr. Ivison sent two nice examples, Oncidium luridum guttatum, and O. altissimum; Epidendrum macrochilum, Brassia maculata, the Three-coloured Vanda, and the pale variety of Cattleya labiata. Mr. Green contributed Brassia Wrayæ, Oncidium altissimum, Epidendrum crassifolium, Oncidium divaricatum, a pretty species, and an Epidendrum.

Roses in pots.—The gems of Messrs. Lane's group, which was first, were Chenédolé, beautifully blossomed, Celine, and Souvenir de la Malmaison.—Mr. Francis produced Coupe d'Hébé, Wm. Jesse, Pauline Plantier, Sophie de Houdilot, Souvenir de la Malmaison, Belle de St. Cyr, Reine du Vierges, Baronne Prevost, Triomphe de Laqueue, Duc de Cazes, Aubernon, and Las Cazes.—In the Amateur's Class, the first prize was awarded to Mr. Terry, gardener to Lady Puller, for nice plants of Persian Yellow, Robin Hood, Coupe d'Hébé, Sophie de Marcilly, Colonel Coombs, Œillet Parfait, Mrs. Bosanquet, Souvenir de la Malmaison, Charles Duval, Chenédolé, Elise Sauvage, and Baronne Prevost.—Mr. Rowland, who was second, had excellent examples of Souvenir d'un Ami, large and sweet; La Reine, in good condition; Blairii, No. 2, and Chenédolé.—Mr. Francis showed the following yellow varieties in a cut state: Williams' Double Yellow, Single Yellow, Yellow Banksia, Elise Sauvage, Harrisonia, and Smith's Yellow.

Messrs. Veitch exhibited a fine collection of *Pitcher Plants*, viz.: Nepenthes Rafflesiana, sanguinea, lævis, distillatoria, phyllamphora, ampullacea, and albo-marginata; together with Sarracenia purpurea, flava, Drummondi, and variolaris. They were fine specimens.

New Plants.—Messrs. Veitch sent a yellow shrubby Calceolaria from Peru, Dendrobium Veitchianum, Cantua dependens, Deutzia gracilis, and a species of Eurybia (?) from New Zealand, with close heads of dingy white Aster-like flowers; Clerodendron Bethuneanum, came from Mr. Speed; Gastrolobium cuneatum, from Messrs. Henderson; Mr. Williams sent Trichopilia coccinea; and from Mr. E. G. Henderson, Sinningia punctata, much superior to S. guttata.

Single Specimens.—The best of these was a very handsome standard yellow Rhododendron, from Mr. Edmonds, gardener to the Duke of Devonshire, at Chiswick-house; a fine bush of Erica metulæflora, from Messrs. Veitch; noble plants of Erica Cavendishii, Pimelea Hendersoni, and Leschenaultia formosa, from Mr. Kinghorn and Mr. Cole; the larger variety of the blue Leschenaultia, from Mr. May, gardener to Mrs. Lawrence; and Clerodendron fallax, in admirable condition, from Mr. Speed, of Edmonton.

Ranunculuses.—Mr. Costar, of Benson, exhibited the following beautiful varieties: Apolla, Joseph Paxton, Atlas, Dr. Lindley, Eliza Cook, Mr. Tyso, Lady Sale, Lord Gough, Regalia, African, Mr. Wolland, Sophia, Medora, Delectus, Naxara, Cedo Nullii, Squire Devenish, Sabina, Victoria, Alice Maud, Gentoo, Mr. Shelling, and Mrs. Turner.

Calceolarias.—Collections were shown by Mr. Franklin and Mr.

Chapman, of Turnham Green. The former had Elegans, Earl of Roslyn, Admiral, Goldfinch, Isabella, Alonza, Lord Byron, Grandiflora, Bridal Ring, Miss Talbot, and Lucy Ashton. The latter sent Success, Cavalier, Florabunda, Sidonia, Crocus, Marion, Alpha, Cardinal, Sappho, Prince of Wales, Cleopatra, and Keepsake.

New Daisies.—Mr. Salter, of Versailles Nursery, had a collection in pots, among which was the following pretty varieties:—Decora, Jupiter, Coquetta, Bacchus, Bertha, Leontine, Gertrude, Charlotte, Amalie, Winter.

Pansies were shown by Mr. Francis, of Hertford, and Mr. Bragg, of Slough. Mr. Francis had Juventa, Duke of Norfolk, Marchioness of Lothian, Mrs. Beck, Penelope, Lucy Neal, Aurora, Purity, Androcles, Supreme, and Miss Edwards. Mr. Bragg produced Junius, Industria, Clotno, Vulcan, Viceroy, Queen of England, Lucidum, Magnificent, Snowflake, Lucy Neal, and Madame Sontag. They were shown in pots; thus the flowers were in their natural form, and not, as practised by some, had a night's pressure of penny pieces upon them to render them of even surface.

Exhibitions held in the Royal Botanic Society's Garden. Regent's Park. *May* 14.—The sixteen collections of stove and greenhouse plants, comprised 170 plants, and among them were the following fine specimens. The height and breadth of the plant in feet is given, that our readers may have an idea of what excellence such plants may be brought to. Acrophyllum venosum (Cole), two feet by two feet, well managed. Aphelexis sesamoides rosea (Cole), two by two, covered with flowers. A. purpurea grandiflora (Williams), two by two. Adenandra fragrans (Green), two by two, a beautiful specimen, densely flowered. A. speciosa (Taylor), five by four, well flowered. Azalea Murrayana (Cole), four by three, profusely bloomed. A. refulgens (Cole), three by three, well bloomed; (Frazer), six by four, profusely bloomed. A. indica vivicans (Green), five by four, a most gorgeous plant. A. sinensis (Green), four by three, splendidly bloomed. A. indica alba (Taylor), five by four, splendidly in bloom. Bossiœa disticha (May), four by four, a splendid, rare plant, well bloomed. B. linophylla (Carson), an elegant drooping plant, five, covered with bloom. Boronia pinnata (Taylor), three by three. Chorozema Henchmanni (Croxford), three by two; (May), three by three and a-half, healthy and well-bloomed. C. Lawrenciana (Speed), three by three. Chironia glutinosa (Cole), three by two, scarcely in bloom, but well grown. Dilwynia eriocephala (Green), three by three, a dense bush, thickly bloomed. Epacris miniata (Cole), four by three, a splendid plant, profusely bloomed; (Croxford), three by three. E. grandiflora (Stanley), four by three, a noble plant well bloomed; (Green), three by three, well flowered. Erica ventricosa coccinea minor (Cole), three by three, most profusely bloomed. E. Hartnellii (Stanley), two by two, well bloomed. E. perspicua nana (Stanley), three by three, densely bloomed. E. perspicua (Frazer), two by two, densely flowered. E. propendens (Williams), three by four, an immense plant, nearly weighed down with bloom. Eriostemon intermedium (May), three by two, a well flowered plant. E. neriifolium

(May), three by three, fine, well bloomed. E. buxifolium (Cole), three by three fine, well bloomed; (Taylor), five by four. Eutaxia pungens (Speed), three by three, profusely bloomed. Franciscea macrophylla (Carson), well bloomed, with twenty-five heads of flowers. Gompholobium polymorphum (May), two by two, trained to a globular trellis, and densely bloomed. Hoya carnosa (Taylor), three by three. Hovea belsia (Stanley), three by two, in profuse bloom. H. pungens (May), two by two, difficult to manage, covered with blossoms. Ixora Javanica (May), three by three, a fresh plant, with scores of heads of blossoms. Leschenaultia Baxterii (May), two by three, a fine, well bloomed plant. L. formosa (Cole), two by three, profusely covered with blossoms. L. biloba major (Cole), three by three, well bloomed. Pimelea spectabilis rosea (May), three by four, completely hid by its fine heads of blossoms. Polygala Dalmaisiana (Green), three by three, well grown and profusely bloomed. Stephanotis floribunda (Cole), four by three; (Speed), five by two and a-half. Tropœolum tricolor major, Stanley, and grandiflora, (Stanley), three well grown and profusely flowered plants, trained to circular trellises.

American Plants.—The display of Rhododendrons, Azaleas, and Kalmias, was most magnificent. The large standard Rhododendron roseum elegans of Mr. John Waterer's of Bagshot, was indeed an exhibition of itself. It has a head thirty feet in circumference, which was profusely covered with blossoms of the most exquisite colour. We learn that several gentlemen of distinction from Russia and Germany, have stated that were the tree shown in its present splendour in St. Petersburgh, Berlin, or Vienna, it would attract crowds of admirers. But Mr. Waterer has in this exhibition many other large standards of great beauty, though none so large as this. Of the more choice or new kinds now in fine condition, we have noted the following as deserving special notice :—*Cruentum :* Very rich crimson, with a fine handsome truss of prettily spotted corollas. *Gloriosum :* A beautiful white variety, with equally large heads of handsome corollas, which are spotted with green. *Hybrid Catawbiense :* A very rich coloured variety, nearly white in the interior of the uppermost petal, and altogether tinged with violet. The specimen of this (which stands at the north-west entrance) is about thirty feet in circumference, and presents a splendid mass of bloom. *Luciferum :* A clear light lilac, slightly tinged with rose; corollas very large and handsome. This is a most desirable variety, and was raised by Mr. Waterer two or three years ago. *Delicatissimum :* One of the very best light varieties in cultivation, with large trusses of white flowers tinged with faint rose, and beautifully spotted with green. Mr. Waterer has in this exhibition, as well as in his nursery grounds, several of the largest and most handsome plants of it in the country. *Macranthum :* A first-rate late flowering variety, the corollas of a beautiful pale rose colour, the margins stained with deep crimson, and the interior finely spotted with orange. *Cyaneum :* This is an excellent purple sort; and the plant we noticed is remarkably handsome, and fully five feet through. It makes a beautiful object in a shrubbery, or on a lawn. *Pictum :* This is a very delicate white variety, readily distinguished by its rich orange spotted at the interior, and desirable on account of its flowering late. *Nivaticum*: Another beautiful white, the plant here is large and remarkably handsome. *Ponticum album*: Of this fine white, there is here a superb example, the plant being fully nine feet high. The head is about three feet through, and supported on a stem six feet high. *Catawbiense* (*duplex*): This is a singular variety, distinguished by its pretty pink double flowers, which are very profuse. *Everestianum*: A remarkably free-blooming sort, forming one of the most beautiful and desirable objects for a lawn or shrubbery. The plant under notice is about five feet high, and profusely flowered. *Erectum*: A first-rate crimson variety in the way of Blandyanum, and equally as good. *Leopardii*: This is a fine rose-purple, and, as the name implies, is distinguished by its large and handsome corollas, which are freely spotted with very dark purple. *Fimbriatum*: A capital variety, with delicate crimson flowers, and very handsome habit. *Album elegans*: This is perhaps the best white in cultivation. The trusses are large and handsome, and the corollas very distinct. The plant here is about nine feet high; the head being three feet through, supported on a stem six feet long. There are many more first-rate sorts, which, even to name, would occupy more space than it is possible for us to give at one time. We shall therefore close our notice of this division, by relating an incident to which no little interest is attached. On the morning of the second general exhibition, the Duke of Norfolk, on visiting the American Garden, with the whole of which he expressed himself much gratified, was attracted by an unnamed new variety, of an exquisite rose or crimson colour, in Mr. Waterer's collection. His Grace, who could well appreciate its rich colour and handsome form, was pleased to permit his name to be affixed to it. Among the more desirable or prominent still in Mr. Baker's collection the following deserve mention: — *Maculatum grandiflorum*: This is very well named, as the corollas, which are of a dark purple colour, and much spotted at the interior, measure rather more than three and a-half inches. *Ponticum album*: A first-rate light coloured variety, with handsome heads of large flowers. *Myrtifolia*: A very desirable dwarf shrubby variety, with clusters of small white flowers, which, however, in the open ground are rather of a rose colour; the foliage is small and neat. *Hyacinthiflora*: A distinct variety, with pretty pink double flowers and handsome leaves. *Catawbiense splendens*: this is a well-known and beautiful rosy-lilac variety, which has been very fine in this collection. Besides these, *Mammoth*, *Cunninghamii*, *ignescens*, and *delicatissimum*, deserve notice as varieties of great merit. *Aucubifolia*: remarkable for the distinct yellow margin of the leaves. Mr. Baker has also some fine standards and large bushy plants, besides numerous capital new light varieties which have not yet been named; also handsome and choice *Azuleas*, *coniferæ*, &c. Messrs. Standish and Noble's collection, has been, from the beginning, in fine flowering order, and, as might be expected, some of the plants are now passed their best; there is still, however, a rich display on this side. The most noticeable are —*Mrs. Bartholomew*: A rosy purple variety with good trusses of large corollas. *Gulnare*: A fine white tinged with pink. *Zuleika*: This is a very delicate coloured variety, somewhat similar to the preceding. *Ingomar:* A choice late variety of a beautiful rosy crimson. *Erectum:* There is here a fine plant of this admirable variety. *Nobleanum bicolor:* A pretty variety in the way of Erectum. In this collection there is also a plant of the far-famed fenubral *Cypress*, about six feet high, which, however, does not assume the pendulous form which it is said to have when full grown.

Roses in pots formed the grand feature of the show—sweet, large, and beautiful. Messrs. Lane's collection, which was first, was uncommonly fine. Their Coupe d'Hébé was a mass of flowers, rich in colour and regular in form. Mr. Francis, too, had the same variety in beautiful condition, as had also Messrs. Paul. Indeed few Roses are more handsome or useful than this fine kind. Among other varieties we noticed Louis Bonaparte, Miellez, Baronne Prevost, Géant des Batailles, Souvenir de la Malmaison, Duchess of Sutherland, Vicomtesse des Cazes, Devoniensis, Blairii No. 2, Pauline Plantier, Paul Perras, Armosa, Augustine Mouchelet, Elise Sauvage, Goubault, Niphetos, William Jesse, Mansais, Madeleine, La Reine, Bougère, and Aubernon. In the Amateurs' Class, Messrs. Terry, Williams, Roser, Rowland, and Chitty, had beautifully managed plants, more especially Mr. Terry's. The foliage was clean and healthy, and the blooms numerous and well blown. Dr. Marx, Persian yellow, Lamarque, Las Casas, Mrs. Bosanquet, Bouquet de Flore, Bourbon Queen, Bardon, Taglioni, Fabvier, Odorata, Comtesse de Lacépède, and Madame Legras, were remarkable for beauty and profusion of bloom. Mr. Francis had a box full of Géant des Batailles, "worked" plants in 3-inch pots, each having a single stem about a foot high, with a brilliant crimson or rather scarlet flower on its summit. These excited much interest, as well they might, for such plants will doubtless be found very useful for many purposes for which large specimens would be worthless.

Cape Heaths were numerous, and for the most part well bloomed. Splendid plants were produced by Messrs. Smith, Cole, Rollisson, Veitch, and others. Among the different varieties were Aristata major, Beaumontiana, Westphalingia, Ventricosa coccinea minor, tortiliflora, suaveolens, Cavendishii, Favoides and its purple variety, Macnabiana, mutabilis, ampullacea, Sprengeli, hybrida, florida, intermedia, Ventricosa carnea, Fastigiata lutescens, Perspicua nana, metulæflora, Odora rosæ, and Hartnelli.

The best *Single Specimens* consisted of the Cattleya mossiæ, from Messrs. Veitch; a huge Pimelea spectabilis and Boronia serrulata from Mr. May, gardener to Mrs. Lawrence; Erica perspicua nana, from Mr. Smith, gardener to W. Quilter, Esq.; Epacris grandiflora, from Messrs. Fraser; and Leschenaultia formosa, from Mr. May, gardener to Miss Traill.

New Plants.—In addition to those produced at Chiswick, Messrs. Veitch had Pimelia verschaffeltiana; Messrs. Henderson, Ceanothus papillosus and rigidus, and Franciscea confertiflora, a promising violet-flowered species; the sulphur-coloured Brunsfelsia nitida, from Jamaica, was shown in this class by Mr. Mitchell, of Brighton; Marshall's Wallflower, diffusing a fragrance like that of Violets, by J. Edwards, Esq., of Holloway; the Oleander-leaved Allamanda, and some equally well known plants from Messrs. Henderson, of the Wellington-road Nursery. We also remarked that certificates of merit were awarded to cut specimens of Beaumontia grandiflora, and the very fragrant Murraya exotica. Mrs. Lawrence had Pimelea Nieppergiana, Hoya bella, and a cut spike of Amherstia nobilis.

Among seedling *Pelargoniums*, the best was Mr. Hoyle's Magnet, which was awarded a certificate of merit for fine colour and abundance of bloom. He had also Chieftain, which is a good flower, and others; Mr. Turner showed First of May; Mr. Dobson, gardener to Mr. Beck, Leader, a very promising flower, Gem, Vulcan, and Isabella; and Mr. Ayres received a certificate of merit for his Fancy, called Formosissimum.

June 11.—*Pelargoniums* were shown in great abundance, and in excellent condition. The prizes offered by the "Seedling Pelargonium Fund" were contested for on this occasion, on which the following raisers were contributors, and many varieties were represented by two, three, and four plants:—From Mr. Beck were Incomparable, Gem, Arethusa, Ambassador, Painter Improved, Cardinal, and Exhibitor; from Mr. Story, Purity; from Mr. Hocken, Nightshade and Honeybell; from Major Foquett, Annette and Agatha; from Mr. White, Charming May and Martile; from Mr. Bragg, Jullien; from Mr. Turner, Flying Dutchman, Vivid, Supreme, Little Nell, Proteus, Breba, Cynthia, Sheet Anchor, and Illuminator; from Mr. Foster, Scarlet Eclipse, Shylock, Lablache, Optimum, Purple Standard, Rubens, Ariadne, Eurydice, Enchantress, Pulcrum, Lavinia, Melissa, and Pansy; from Mr. Hoyle, Beatrice, Elise, Herald, Magnet, Ganymede, Remus, Chieftain, Azim, Colonel of the Buffs, and Van Tromp. The Censors, Messrs. Riley, Stains, Veitch, and Robinson, furnished the following award: First prize, Magnet (Hoyle); second prize, Purple Standard (Foster); third prize, Elise (Hoyle); fourth prize, Ganymede (Hoyle); fifth prize, Scarlet Eclipse (Foster); sixth prize, Arethusa (Beck); seventh prize, Herald (Hoyle).

Seedling Fancy Pelargoniums were shown in classes, the division of colours being—Class A, light flowers, not darker than Modestum; Class B, rose flowers, not darker than Minerva; Class C, crimson flowers, not darker than Fairy Queen; Class D, dark, not lighter than Hero of Surrey; Class E, dark self, not lighter than Defiance. In these classes thirty-four varieties were shown. The censors made the following award: Class A, none worthy; Class B, Mirandum (Ayres), a second prize; Class C, Formosissimum (Ayres), a first prize; Perpetuum (Ambrose), a second prize; Triumphant (Ambrose), a third prize; Class D, Superbum (Ambrose), a first prize; Richard Cobden (Ambrose), a second prize; Caliban (Ayres), a second prize (equal); Gipsy Queen (Ayres), a third prize: Class E, Captivation (Ambrose), a first prize; Advancer (Ayres), a second prize.

The Society's certificates were awarded to Ariadne (Foster), and Elise (Hoyle). A small silver medal was awarded to Magnet (Hoyle), for an exhibition of four plants; the same variety receiving the Society's certificate at the previous exhibition.

In *Fancy Pelargoniums,* Superbum (Ambrose), Advancer (Ayres), and Captivation (Ambrose), were selected by the Society's censors for certificates. [The descriptive particulars we shall give in our next number.]

The collection of cut blooms of *Ranunculuses*, by Mr. Carey Tyso, of Wallingford, which gained the first prize. contained the following fine varieties:—Amasis, Dr. Channing, Apollo, Naxara, Irreproachable, Felix, Faustina, Lambton, Hephzibah, Milo, Berinus, Protector, Burus, Alexis, Lady Dartmouth, Carouse, Kilgour's Queen and Princess, Coronation, Exhibitor, Festus, Delectus, Margaret, Sabina, Costar's Apollo, Gomer, Olympia, Dr. Neill, Mrs. Neilson, Highland Venus, Xerxes, Regent, Saladin—many of them seedlings raised by Mr. Tyso.

NATIONAL FLORICULTURAL SOCIETY, *May* 8.—R. Stains, Esq., in the chair. Twenty-eight new members were elected, and thirteen proposed.

Amongst the articles exhibited was a seedling Azalea indica, named Pictura, from Mr. Reed, gardener to W. Coombes, Esq. The censors gave it a commendation, the third degree of excellence. Free bloomer, good habit, medium form, large size, white ground striped with rosy purple. A seedling Cineraria. named Prince Arthur. came from Mr. E. G. Henderson, St. John's Wood. It received a commendation for an advance of form in that colour (rich crimson, the same as Flora McIvor); habit tolerable, as far as we could judge from the size of the plant. A cut flower of a seedling Azalea, unnamed, came from Mr. Cathel. of Wavertree, near Liverpool. This is a promising flower, of excellent form and good substance. but rather deficient in colour. The censors would like to see it again on the plant, in order to judge of its habit.

The Rev. Mr. Garrett sent a seedling Pansey of some merit. The censors desired it to be sent again in better condition.

Sixty seedlings of various kinds, but chiefly Cinerarias, were exhibited, and the above-mentioned were all the censors thought worthy of any remark. No first class prizes, or even certificates, were awarded, the censors, one and all, being firmly resolved that nothing shall receive a favourable opinion from them unless it be decidedly superior to varieties already before the public.

The rooms were ornamented, as usual, by collections of named plants in bloom.

Mr. Henderson, of St. John's Wood, sent a choice collection of six new Cinerarias, viz., Lady Hume Campbell, white, blue tips, excellent form; Marianne, white, with purple tips (this obtained a certificate at the last meeting); Mrs. Sidney Herbert, pale rose; Catherine Hayes, blue tips, white ground, excellent form; Catherine Seaton, white ground, crimson border; and Madame Sontag, white centre, lilac tips. Besides these, on another table, the same gentleman sent a collection of twenty still older varieties.

Mr. Henderson, of Pine-apple-place, sent also a collection of new Cinerarias, amongst which were David Copperfield, with a grey disc, belted with rosy crimson; Lettice Arnold, rosy purple and white, large, and of a compact habit; Renville, violet blue, with a belt of white round the disc; Lady Gertrude, deep blue self, broad petals, habit dwarf and compact; Nymph, white, with dark disc; Pauline, violet plum self, very distinct, fine form, and excellent habit. Also a splendid plant of Azalea magnifica, covered with its semi-double rosy crimson blossom; also, a fine high-coloured seedling Amaryllis, named Professor Leibig; a pretty Heath, named Victoria; a hybrid allied to E. aristata; and the pretty Cheiranthus Marshallii, a hybrid with large golden flowers, of a good form; also a pretty Geranium, named White Unique, which promises to be an useful bedding variety. Mr. Bragg, of Slough, sent a fine pan of Pansies in excellent condition. Mr. Epps, an Erica named E. tricolor Eppsii. Mr. Ayres sent some fancy Geraniums; and Mr. Ivery, a Pelargonium named Lilac Unique.

May 22—On this occasion both seedling and named plants were supplied in tolerable profusion and variety. Of Pelargoniums, Mr. Beck's Incomparable was commended for fine colour, and Mr. Hoyle's Magnet and Herald were recommended to be "seen again." Among Cinerarias, a certificate was awarded to Rosalind, a medium sized white flower with a grey disc, and narrowly edged with ultramarine blue. This was shown by Mr. Henderson, of the Wellington-road Nursery. C. formosa, from Mr. Ambrose, was commended as a good marketable kind: it is a white ground flower, with a rosy purple tip. C. nonsuch, a lilac purple self, from Mr. Henderson, was also commended by the censors. Some nice-looking Calceolarias were produced by Mr. Gaines and others; but none were considered by the judges worthy of distinction. Pansey Pandora, from Mr. Hunt, received a certificate: it has a bright yellow ground, with a broad purple margin shaded with puce; surface smooth, and substance and shape good. A white ground seedling Pansey, from Mr. Chater, was commended. A collection of Mimuluses came from Mr. Wyness, and another of breeder Tulips from Mr. Willison, of Whitby. Among the latter we remarked a finely-formed rose, called Juliet, with a very fine base. Gloxinias, Cinerarias, &c. were exhibited by Mr. Henderson, Wellington road Nursery, and miscellaneous plants by Messrs. Henderson, of Pine-apple-place, and others. Fancy Geraniums were plentiful; and conspicuous among other things on the table were a straw-coloured Rhododendron, and a pink Azalea. stated to be a hybrid between a Rhododendron and an Azalea.

June 12.—There was a good display of seedling Pelargoniums on this occasion. A first class certificate was awarded to Elise, a large flower, with pink under petals, and white eye. Upper petals maroon, edged with delicate pink; a similar award was made to Ganymede, a distinct nice-looking flower with delicate pink under petals, shaded with lilac; upper petals dark, narrowly edged with lilac. Ditto. to Magnet, on account of its fine colour and profusion of bloom. The above came from Mr. Hoyle, of Reading. Mr. Beck, of Isleworth, received a certificate for Arethusa, a nice variety, with maroon top, very delicate salmon under petals, and a light eye. Incomparable, from the same raiser, was commended for fine colour. Purple Standard, from E. Foster, Esq., of Clewer, received a certificate; and so did the same grower's Enchantress and Ariadne, both highly desirable sorts, more especially the latter. Mr. Ayres, of Blackheath, was awarded a first-class certificate for a fancy Pelargonium, named Advancer, a well-shaped very desirable flower; and certificates for Caliban, Miranda, and Gipsy Queen. Beauty of St. John's Wood, from Mr. E. G. Henderson, was commended for its colour; but in its present state it is too small. The same nurseryman's Queen of the Fancies was commended for fine form and general promising appearance. Dr. Maclean had a seedling Pink, called Mrs. Maclean. Some Calceolarias were shown; but none were considered worth rewarding. A shrubby yellow flowered bedding kind, from Wood and Ingram, of Huntingdon, but it was loose in habit. Wellington Hero (bright yellow), from Mr. E. G. Henderson, was commended for bright colour. Mr. Turner, of Slough, had the beautiful seedling Pansies, named National, Blanche, Swansdown, and Euphemia, and five Pelargoniums. Messrs. Henderson sent a nice light Fuchsia.

ROYAL SOUTH LONDON SOCIETY.—At the exhibition held on May 28th, in the Surrey Gardens, there was a newly-broke Tulip shown, named *Mr. Smith*. It is byblomen, of good substance, smooth edge, and pure bottom, and considered likely to prove an useful flower. A certificate of excellence was awarded for it, also for a *Rose Tulip*, named *Princess Helena*. The flower is larger than any other Rose Tulip; it is a pure flower, very prettily marked with pale rose, is considered a noble flower, and a valuable acquisition.

Miss Charteris Calceolaria was shown by Mr. Gaines. It is a rich cream colour, with a crimson blotch; it is a good round full flower.

Pansies.—The following were the best shown:—Duke of Norfolk, Almansor, Mrs. Beck, Sir R. Peel, Addison, Wonderful, Example, Duchess of Rutland. Sylvia, Bellona, Constellation, Androcles, Disraelii, Sambo, Supreme, Sir John Franklin, Aurora, Ophir, Rainbow, Zabdi, Masterpiece, and Optimus.

ROYAL HORTICULTURAL SOCIETY OF CORNWALL.—This admirably-managed and well-supported Society, held their first meeting for the present year on May 16th. The prizes were awarded as follows:—Ornamental Plant, in flower, not previously exhibited—Abelia floribunda: Bronze Medal. Mr. F. Passingham. Best Twelve Stove and Greenhouse Plants—Azalea indica grandiflora, Aphelexis spectabilis grandiflora, Pimelea Hendersoni, Azalea triumphans, Erica ventricosa incarnata, Eriostemon intermedium, Aphelexis humilis, Euphorbia splendens, Begonia sanguinea, Acacia pulchella, Leschenaultia formosa, Gloxiana Teuchlerii: Silver Medal, Mr. Passingham. 2nd—Epacris grandiflora, Sprengelia incarnata, Pimelea decussata, Leschenaultia biloba, Azalea triumphans, A. optima, Tropœolum tricolorum, Vinca ocellata alba, Clerodendron squamatum, Chironia floribunda, Clematis Sieboldii, and a fancy Geranium: Mr. R. Friend, gardener to Mrs. G. C. Fox. 3rd—Euphorbia splendens, Clematis azurea grandiflora, Begonia floribunda, Epacris miniata, Gardenia florida, Zichya tricolor. Azalea alba, Erica Cavendishii, Chorozema cordifolium, Oxalis floribunda, Azalea carminata, Corræa ventricosa: Mr. G. N. Simmons. 4th—Clerodendron splendens, C. affine, Leschenaultia grandiflora, Epacris miniata, Vinca ocellata, Tropoeolum tricolorum, Aphelexis sesamoides, Tetratheca verticillata, Erica florida, campanulata, Pimelea Nieppergiana: Mr. Daubuz. Best six varieties of ditto—Aphelexis purpurea macrantha, Epacris miniata, a Gompholobium, Leschenaultia formosa, Chorozema rotundifolium, Begonia alba coccinea: Mr. F. Passingham. 2nd—Tetratheca verticillata, Ardisia crenulata, Erica ventricosa superba, Pimelea Hendersoni, Aphelexis purpurea macrantha, Azalea triumphans: Mr. R. Friend. 3rd—Eutaxia myrtifolia, Leschenaultia biloba, Adenandra speciosa, Clerodendron affine, an Everlasting, Eriostemon intermedium: Mr. Daubuz. 4th—Pimelea hispida, Tropœolum tricolorum, Azalea indica alba, Epacris grandiflora, Epiphyllum Jenkinsoni, Nerium Oleander: Rev. T. Phillpotts. Best specimen of Stove Plant—Torenia Asiatica: Rev. T. Phillpotts. 2nd—Clerodendron affine: Mr. Daubuz. 3rd—Euphorbia splendens: Mr. F. Passingham. Best Greenhouse specimen—Aphelexis purpurea grandiflora: Mr. F. Passingham. 2nd—Pimelea Hendersoni: Mr. R. Friend. 3rd—Chorozema varium: Rev. T. Phillpotts. Best Six Orchids, in flower—Phaius Wallichii, Calanthe veratrifolia, Oncidium flexuosum, and two Lycastes: Rev. T. Phillpotts. 2nd—Cattleya Mossiæ, Calanthe veratrifolia, Oncidium leucochilum, and O. pumilum: Mr. G. N. Simmons. 3rd—Lycaste cruenta, Maxillaria pubescens, Cattleya Forbesii: Mr. W. M. Tweedy. Best specimen—Cattleya Mossiæ: Rev. T. Phillpotts. 2nd—Calanthe veratrifolia: Mr. W. M. Tweedy. Best Six Gloxinias, Gesneras, Achimenes, or Sinningias—Teuchlerii, Fyfiana, Maxima, Sinningia guttata, Achimenes grandiflora, A. picta: Mr. Daubuz. 2nd—Gesnera Douglassii, G. Suttonii, G. bulbosa, Achimenes picta, A. grandiflora: Rev. T. Phillpotts. Best Six Bulbous Plants, in flower: Mr. R. Friend. Best Six Geraniums—Orion, Beck's Rosy Circle, Arnal's Virgin Queen, Forget-me-not, Marmion, and a Seedling: Mr. R. Friend. 2nd—Gulielma, Field Marshal, Gaines' Meleager, Beeswing, Cruentum, Forster's Constance: Mr. Daubuz. Best Six Fancies (Queen Victoria, Anais, Lady Rivers, La Belle Africana, Unique, Sidonie: Mr. F. Passingham. Best Six Heaths—Bowieana, Cavendishii, ventricosa conspicua, v. purpurescens, v. fasciculata rosea, v. superba: Mr. F. Passingham. 2nd—Elegans, perspicua nana, Loddigesii, dilecta, and sauveolens: Mr. Daubuz. Best Specimen Heath—Erica coccinea minor: Rev. T. Phillpotts. 2nd—Ventricosa blanda: Mr. F. Passingham. Best Collection of Azaleas, Rhododendrons, or Kalmias—Azalea indica grandiflora, Herbertii, triumphans, optima, splendida, Broughtonii: Mr. F. Passingham. 2nd—Indica alba, Exquisite, Rosea, Duke of Devonshire, Knight's optima, Rosea punctata: Mr. Daubuz. Best specimen of ditto—variegata: Rev. T. Phillpotts. 2nd—Optima: Mr. F. Passingham. Best collection of Cinerarias—Cerito, Annie, Miss Harriet, Climax, Purpurea, Princess Royal: Mr. F. Passingham. 2nd—Six Seedlings: Mr. W. M. Tweedy. Best specimen of ditto—Cerito: Mr. F. Passingham. Best collection of Calceolarias—Elegans, Eclipse, Lucy Neal, Rebecca, Alboni: Mr. Daubuz. 2nd—Delicata, Queen of Beauties, Captivation, Resplendens, Standard, Sir C. Napier: Mr. F. Passingham.

Best specimen of ditto—Seedling: Mr. Daubuz. Best collection of Heartsease—Zabdi, Sylph, Prince of Orange, Optimus, Cornish Lass, Rainbow, Caroline, Polynices, Climax, Duchess of Rutland, Supreme, Marchioness of Lothian, Magnificent, Attraction, Superb, Juventa: Mr. W. Woolcock. 2nd—Ophir, Lady Sale, Taglioni, Lucy Neal, Splendid, Blue Perfection, Great Western, Caroline, Oats's Seedling, Climax, Malvern, Punch: Rev. Canon Rogers. Best Six Roses in pots—Baronne Prevost, Niphetos, Duchess of Sutherland, Highclere Seedling, Madame Laffay, La Belle Allamande: Mr. F. Passingham. 2nd—Souvenir de la Malmaison, Géant des Batailles, &c.: Mr. R. Friend. 3rd—Triumphant, Géant des Batailles, Madame Desprez, General Lamoriciere, Admiral Reynolds —*West Briton.*

HORTICULTURAL SOCIETY ROOMS, 21 REGENT STREET. *June* 17. —Mr. May, gardener to E. Goodhart, Esq., Langley Park, Beckenham, Kent, sent a beautiful purple and white striped Phlox, called Mayii variegata. It is one of the prettiest we have seen of the many seedlings obtained from the Drummond Phlox, crossed with other kinds; and if constant, will, no doubt, be an acquisition. Mr. Mackintosh, nurseryman, Maida-vale, Edgeware-road, furnished a small example of a white Chrysanthemum in blossom, in order to prove that this favourite autumnal flower may be made to bloom in the middle of summer. It was raised from a cutting put in in December last, and had been grown on a greenhouse shelf near the glass. From the garden of the Society came the scarce Brassavola Digbyana, with a broad fringed lip; Cyrtochilum stellatum, having bright green healthy leaves, a rare occurrence with this plant; Cyrtoceras reflexum, Franciscea Hopeana, a profusely-flowered medium-sized bush of Pimelea decussata; Dillwynia clavata, one of the handsomest of the genus; an Epacris, two Cape Heaths, eight varieties of Achimenes, an Everlasting, and the Chinese Indigo plant, (Isatis indigotica).

CRASSULA COCCINEA AND VERSICOLOR.—A market gardener near London, who supplies Covent Garden Market with these very showy flowering plants, has twenty thousand of them coming into bloom. When in perfection they are highly ornamental, and their thick waxy-like flowers are strikingly beautiful; they continue, too, a long time in bloom. To ornament a greenhouse in summer, or sitting-room, they are charming things, and diffuse an agreeable fragrance. The cost per plant is but a trifle. We have seen beds of the scarlet in the flower-garden, and they had a fine appearance.

IRIS SUSIANA (DEATH'S-HEAD IRIS).—How rarely this is well grown in this country, and not often flowered. I saw, a few days since, in the gardens of the Luxembourg, at Paris, large patches of it grown in a cold frame; there were ten or twelve flowers (half as large again as any I ever saw in this country) open at the same time; the plants appeared to be growing in very light soil. I shall try this mode of cultivating this interesting plant, and recommend your readers to do the same. The roots are to be bought with the other Dutch roots in the autumn; but I suspect that those usually purchased have been too long out of the ground, or have been taken up too early; and that this is probably the reason they do not often succeed.—*Juvenis.*

Roses.—The vigour of the bloom is very much promoted by giving the roots a good watering once a-week with liquid-manure. The drainage from a farm or stable-yard is just the article to apply. Where it is strong, it should be diluted with an equal quantity of rain or pond-water, which is better than well-water; the latter should be pumped into a tank or shallow reservoir, to be exposed for a day or two before using. The application of liquid-manure to Carnations, Picotees, as well as other soft-wooded pot plants, or grown in beds, borders, &c., is always much benefited thereby. It must not be poured upon the foliage. *Liquid-manure* is easily provided by putting a due portion of perfectly-decomposed manure into *soft* water, and stirring it up occasionally. Use it when the sediment is settled.

Victoria Regia. Royal Water Lily.—In a recent number we noticed this noble plant, and suggested the propriety of attempts to grow it out of doors, as well as attempts at the production of hybrids between it and the common Water Lilies. We now have to remark that Messrs. Weeks and Co., of Chelsea, have attempted to cultivate the Royal Water Lily in an *open heated* pond. The plant flourishes admirably; the leaves (five of them) are about four feet across, and when we visited the place, on the 17th of May, its first flower was fully expanded, and another bud nearly so. Up to a day or two before the flower expanded, the plant had been protected in some degree by a frame, the sides of which dipped into the water. No doubt need be entertained of its ultimate success, and where there is the advantage of the warm reservoirs, &c., in connexion with the engines worked in the large factories of Yorkshire, Lancashire, &c., the plant may be cultivated most successfully; and where a basin, or tank, can be formed near to a stove or plant-house, heated by steam or hot water, it will be an easy matter to have a pipe, or more, pass across the same, at a suitable depth in the water, and, thus heated, would answer satisfactorily.

Salvia patens and Salvia patens alba.—My flower-garden is sheltered from the west, north, and east winds. Last year I had in it two beds of the above plants. One was of a circular form, and the other star-shaped, with a circular centre. I had them planted in the following manner, and as they are of similar growth, they grouped well together. The centre portion of the circular bed was planted with the white-flowered, and a broad margin around it with the blue. The centre portion of the star-shaped bed was planted with the white, and the angular parts with the blue. The effect was most strikingly pretty, and wherever adopted will be much admired. Being protected from strong wind, the flowers did not suffer, but displayed their beauties fully.—*Clericus.*

Stoke Newington Chrysanthemum Society.—Mr. Taylor recently delivered a lecture on the culture of the Chrysanthemum: and he observed, "I prefer propagating as soon after the bloom is over as I can get cuttings, as by striking early it enables the young plant to store up sufficient matter to meet the demands in the growing season, for in my opinion it cannot be grown too vigorous. I prefer the strongest suckers, with a portion of roots to each." In a three-inch pot, with a compost of loam and sand, he puts three suckers. He places them in a cold frame to keep them stiff, and never strikes them in heat, as they draw up weakly. In April pots off singly into six-inch pots, in one-third yellow loam, one-third rotten turf, and one-third well-rotted manure, adding sufficient sand or grit to make the compost porous. Places them in the open air, where they are protected from east winds, rather wide a part, turning them often to prevent the roots extending into the soil, and to have the plants of uniform growth. At the end of June, or early in July, gives the last repotting into very large pots, having plenty of drainage, and the compost in a rough state. Great care is paid to give them a due proportion of water, never to suffer them to wither, or the blossoms would be deformed, but avoids soddening the soil. The first week in August he begins to supply liquid manure once a-week, increasing its strength as the plant advances, but gives up the liquid as soon as the flowers begin to expand. Constant attention in the early stage of the plants is essential to success. He never stops the main stem, and pinches off all side shoots. As soon as the blooming stems become visible he removes all but three or four, and only one flower-bud is allowed to remain on each stem; prefers the centre bud if it be round and perfect.

TUBEROSES.—The best soil for these is light sandy earth, mixed with one-third part very rotten cow-dung. About the middle of April prepare your bed by clearing it out to the depth of three feet, and fill it nearly to the top with fresh stable dung that has been cast into a heap to heat a fortnight before, treading it firmly. Upon this lay eighteen inches in depth of compost, sloping it to the south. In a day or two after, plant your roots five inches distant from each other, just covering the tubers with earth. Shut up the bed at night, especially if frosty; or if in the open air cover it with a double mat till the leaves appear; but give little or no water, and protect it from heavy rains. When the leaves have grown about an inch long, add a little compost to the surface. If the season prove dry, your bed will now require watering, and towards the end of June and in July, when the leaves are in full vigour, very copiously; from this period to the beginning of winter nothing more is necessary. About the first week in December, thatch the bed over with dry straw, if in the open air; and about the middle of February, if not prevented by frost, take up the roots, preserving the fibres, and pack them in very dry sand in cellars till April, when they must be replanted as before. The taking up disposes them to form their flower stems earlier. Offsets will by this time have made their appearance round each root, and must be removed. This second year some of the largest roots will probably flower, and if early, they may be allowed to blossom in the open air; but if later than July, they should be potted and placed under glass. Such is an outline of the general management of Tuberoses in the open air, or in a frame.—*Gardeners' Chronicle.*

CANTUAS.—It appears there has existed some confusion relative to the proper names of the plants known in this country as C. dependens, buxifolia, and bicolor. Messrs. Veitch, of Exeter, introduced from their collector in Peru the plant they are now selling under the name of *C. dependens*, and up to the day of their commencing disposing of it they had the sole possession of the stock. The same plant, however, has been called in our own country, by some persons, *C. buxifolia*. For some time there has been a Cantua buxifolia existing in the continental nurseries, and hence the conclusion by many was that they were one and the same species. It, however, now turns out that the species on the Continent were fer to is the *Cantua bicolor* of our British nurseries, and is a very different plant from Messrs. Veitch's very splendid species. (*Editor.*)

TEN THOUSAND FRENCH TULIPS.—It was advertised that this number of superb Tulips were to be seen in bloom in the nursery of Mr. Adams at Kensington. We saw the display, but did not observe a single flower worth a place in an English florist's Tulip-bed. There were only Roses and Byblomens, no Bizarres. All the flowers we examined had bad, dirty bottoms. We went to the exhibition of them, with high expectations, but got sadly disappointed. We are astonished that our brother florists of France should grow such indifferent flowers, whilst they might have gems of the highest character.

THE GLYCINE SINENSIS, AND WHERE IT IS FOUND WILD.—In the end of May, when the Overland Mail puts these notes into your hands, the noble Glycine, or Wistaria chinensis, will be in full bloom at Chiswick, and in many other English gardens. It was introduced, as your readers know, from a garden near Canton—that of a Chinese merchant, named Consequa; but it is not indigenous to the south of China, and is rarely seen in perfection there. Indeed, the simple fact of its being perfectly hardy in England shows at once that it has a more northern origin.

Before the last war with China, foreigners were confined to narrow limits about Canton and Macao, where they had no means of knowing anything of the more hardy plants of the north, which they sometimes met with in gardens, and introduced to Europe. Now, however, we can prosecute our botanical researches in a country which is nearly a thousand miles further to the north-east, and at many other places which lie along that line of coast. The island of Koo-lung-sû, for example, near Amoy, was taken by our troops during the war, and occupied by them for some years, according to treaty, until a portion of the ransom money was paid. It seemed to have been a place of residence to many of the mandarins and principal merchants in peaceful times, and boasted of its gardens and pretty fish ponds. When I first saw these gardens they were mostly in a ruinous condition, and everywhere exhibited the fatal effects of war. Many beautiful plants, however, still continued to grow and scramble about over the ruined walls. Captain Hall, of the Madras army, who was stationed there for some time, was very fond of botany, and took great pleasure in pointing out to me all the plants which he met with in his rambles. "I have good news for you," said he one morning, when I met him; "come with me and I shall show you the most beautiful plant on the island, which I have just discovered. It is a creeper, it produces fine long racemes of lilac flowers before it puts forth its leaves, and it is deliciously fragrant." What could it be? was it new? would it produce perfect seeds? or could young plants be procured to send home? were questions which rapidly suggested themselves. It is only the enthusiastic botanical collector who can form an idea of the amount of excitement and pleasure there is when one fancies he is on the eve of finding a new and beautiful flower. Captain Hall led the way, and we soon reached the spot where the plant grew. There had been no exaggeration in his description; there it was, covering an old wall, and scrambling up the branches of the adjoining trees; it bore long racemes of pea-shaped flowers, and scented the surrounding air with its odours. Need I say it was the beautiful Glycine. But it was not found in a wild state even at Amoy, and had evidently been brought from more northern latitudes.

When I reached Chusan, in latitude 30° north, I found a remarkable change in the appearance of the vegetation. Tropical forms had entirely disappeared, or were rarely met with. Although the summers were as warm, or even warmer, than they were in the south, yet the winters were nearly as cold as those we have in England. On this ground, and all over the provinces of Chekiang and Kiangnan, the Glycine seemed to be at home. It grew wild on every hill-side, scrambling about in the hedges by the footpaths, and hanging over and dipping its leaves and flowers into the canals and mountain streams.

But by far the most beautiful effect is produced when it attaches itself to the stems and branches of other trees. This is not unfrequent in nature, and is often copied by the Chinese and introduced into their gardens. You can scarcely imagine anything more gorgeous or beautiful than a large plant of this kind in full bloom. Its main and larger branches are entwined round every branch and branchlet of the tree, and from them hundreds of small ones hang down until they nearly touch the ground. The whole of the branches are covered with flower-buds, which a day or two of warm weather brings rapidly forward into bloom. To form an idea of the effect produced by these thousands of long lilac racemes, you must imagine, if you can, a floral cascade, or a Weeping Willow covered with the flowers of the Glycine. There are some large specimens of this kind on the island of Chusan. One, in particular, was most striking. Not content with monopolising one tree, it had scrambled over a whole clump, and formed a pretty arbour underneath. When I saw it last it was in full flower, and had a most charming appearance.

The Chinese are fond of growing the Glycine on trellis-work, and forming long covered walks in the garden, or arbours and porticos in front of their doors. In a former letter I noticed a large specimen of this description in the garden of the British consulate at Shanghae. There is another remarkable one in the garden of a mandarin at Ningpo; growing in company with it is the fine new variety introduced lately by the Horticultural Society of London, and published in the Journal of the Society. In foliage and general habit the two kinds are nearly alike, but the new one bears long racemes of pure white flowers.—*Gardeners' Chronicle, R. F.*

[In the garden belonging to W. O. Hunt, Esq., of Stratford-on-Avon, there is a plant now (June, 1851,) which has upwards of 25,000 racemes of flowers.]

CULTURE OF IXORAS.—They require to be cultivated in a warm and moist stove; and this is not only necessary in order to produce luxuriant growth, but also to prevent the plants from becoming infested with insects, to which several of them are very commonly subject, and which often cannot be got rid of without making the plants look very unsightly and unhealthy. Pits heated with fermenting stable-litter or leaves, are well-suited to the growth of such plants as Ixora; the confined and *moist* atmosphere encourages a vigorous growth, and this, with the vapour arising from fermenting matter, are great preventatives of the breeding of insects. The soil may consist of about one-half light loam and peat, or leaf-mould, with a small quantity of sharp sand, and care taken to drain it well, and in shifting, not to overpot it.—*J. S. Royal Gardens of Kew.*

RHODODENDRON ARBOREUM.—In a recent number I perceive a north countryman asks whether this Rhododendron, a native of Nepaul, blooms in any other part of England besides Cornwall. I have the pleasure to state that at Dolaurethy in Carmarthenshire there is one tree which is nine feet high, and as much across, which has stood many years uninjured, without any protection, and each season it has bloomed profusely. This season it is not so profuse, but it has had two hundred and thirty fine heads of its bright crimson flowers, which produced a splendid show.—*An under Gardener.*

THE ARBORETUM AT IPSWICH.—Considerable progress has been made with this undertaking since the commencement, a large body of men having been constantly employed laying out and planting the grounds, agreeably to the plans prepared by Mr. Pontey, and the whole has been enclosed with a substantial large fencing. The bridle-way leading from Fonnereau-street to the mill at the top of Bolton divides the enclosure into two unequal portions, which, from their respective elevations, may be appropriately denominated the upper and lower gardens. The upper garden is the one which it is proposed to throw open to the public in the evening; the lower will be exclusively reserved for the subscribers. The entrance to the upper garden will be by a gateway in the Henley-road, almost immediately facing the site of the new Grammar School, from which a broad walk will conduct in a direct line to the opposite side, intersecting at both ends another walk, which, by a somewhat devious course, makes the entire circuit of the garden. The surface has been judiciously diversified by the formation of mounds, from whose summits can be obtained a succession of delightful views of the surrounding country, including the beautiful river Orwell. To those who desire a warmer and more sheltered promenade, the lower garden will be highly acceptable, as it is completely embosomed in a valley where no rude winds can scarcely enter. A path of moderate width also encircles this garden, on one side rising into a natural terrace, and on the other skirting the park palings. In the lowest corner of the valley a sheet of ornamental water is in the course of being introduced, by an extension of the lake on the adjacent portion of the park known as the "wilderness." The entrance gate will be placed in Fonnereau-street, by the side of the bridle-way, and the path into the garden will pass under a row of fine old trees. The bridle-way is pierced by two brick tunnels, at convenient distances, which, beside giving direct communication between the gardens, afford a ready means of varying the walks. Most of the planting has been accomplished, the season for which has been extremely favourable; the walks are all laid down and gravelled, and the mounds formed; but in the upper garden none of the turf has yet been laid. When completed, the Arboretum will certainly be a great acquisition to the town, and will, no doubt, become a favourite resort of the inhabitants.

Perennials propagate by Slips and Cuttings.—That is, herbaceous plants; and the difference between slips and cuttings is, that slips are side pieces of any plant drawn out, or cut out, with a few roots to them. There are scores of border plants that can be increased in the early part of summer from these slips, without at all injuring the mother plants. All they require is to be planted in some light soil, in a shaded place, away from the sun, and to be watered from time to time as the weather tells. Cuttings of such border plants as are scarce should have a hand-glass placed over them, on a shady border, as without it the dry winds would be apt to wither them, now that they are as fresh and succulent as hothouse plants.—A. Z.

Wax Flowers.—Amongst the numerous specimens of artistical ingenuity and industry which the Great Exhibition has brought into notice, there is none more elegant or interesting than the wax flowers, of which there are several exhibitors. It will be readily admitted that much may be done in producing effect to the eye by the tasteful display of a splendid bouquet of these flowers in an elegant case. Besides many others, those shown by Mrs. Temple are very fine, being correct imitations of nature. The case contains a plant of the splendid Amherstia nobilis (one of the rarest plants in Europe); the orchids from the roof are Stanhopeas; the pots contain Epidendrum Stamfordianum, Cattleya Pinelli, Bilbergia Morelliana, Anguloa, Cattleya candida, Cymbidium eberneum, and others equally rare. The climbers are all choice, comprising Dipladenia, Hoya campanulata, Clematis smilacifolia, the splendid Gloriosa superba, and varieties of Passiflora. There are also a few native flowers in the vases. Outside the case are two shades—one a hop-pole, the other a fine specimen of Bignonia. Other splendid specimens of Mrs. Temple's work may be seen at the New Bazaar in Regent-street; some bouquets, in large glass cases, being marked as high as forty-five guineas.

Seedling Flowers at the Botanical Society, Regent's Park.—We have never seen such a display of new Pelargoniums as were at the Royal Botanical Society's Show on the 11th inst.; there must have been scores, if not hundreds. In the fancy class, which we do not judge by such rigid rules as the ordinary show flowers, there was an immense variety. The most remarkable were Ayres' *Advancer*, a fine deep colour, good form, and plenty of substance, received a certificate, and deserved it; *Advancer* is a good name, for it is better than *Formosa*. His *Gipsy Queen*, pretty, spotted, and crumply, was not so good; it had some sort of distinction, called a third prize. Ambrose's *Superba*, a brownish-red, with rosy under petals, was very pretty, and in the present state of fancy varieties deserved a certificate, which was awarded. His *Captivation*, which also had a certificate, did not deserve it; there was no compactness; it was, moreover, a dull colour; and *Triumphant*, which received a prize for brilliant colour, was loose and crumply; however, the recommendation of the judges was especially for colour, which was scarlet-rose. In the show varieties, *Exhibitor*, which is a very noble flower, with good trusses, plenty of substance, of better than average form, and very striking, had no mark of distinction, perhaps from a fancied likeness to *Emily*, but it deserved a certificate much more than some which had one. *Ambassador*, a good, showy, useful variety, a little too much like some we have, was noticeable. Hoyle's *Van Tromp*, rich purply-lake, was very showy, though somewhat loosely shown. *Ganymede* was a good deal like many we possess. *Colonel of the Buffs* was very bright and striking. *Magnet*, already mentioned more than once, had what was called on the card a first prize. *Eliza*, a bright scarlety-pink, had a third prize; and *Herald* is pretty, but crumpled. The seedlings were altogether striking, and in one tent, which was crowded beyond measure; in fact, it was almost fighting work to get to the table. We will not guarantee that we saw all the awards.—*G. Glenny.* (*Cottage Gardener.*)

RHODODENDRONS AND AZALEAS.—Mr. Hosea Waterer's exhibition of Rhododendrons and Azaleas in the Horticultural Gardens at Chiswick is a most magnificent display of floral beauty, and the entire number of plants are perfectly hardy. The skill of the hybridizer has wrought wonders in blending the rich colour of the Indian species with the hardy constitution of the American, and the results are the numberless varieties of tint in almost every shade from pure white to the richest crimson, and from pure lilac to the richest purple, all possessing a sufficient hardiness of constitution to withstand the winters of our climate. A more charming addition to a nobleman's flower-garden than a collection of the best varieties of Rhododendrons could hardly be suggested, and in every place, however small, some appropriate situation might be found for their cultivation. Among the many magnificent sorts now in bloom in Mr. Waterer's exhibition, the following are particularly worthy of notice:—Rembrandt, rosy-pink, flowers individually large and fine; Rubens, rosy-pink, trusses under canvas, somewhat loose; hyacinthæflorum, a small lilac-blossomed kind, quite a bouquet of flowers; atrosanguineum, fine crimson; densiflorum, plum-colour; Currieanum, large flowers, and a good trusser; Achimedes, rose; Titian, glowing crimson, flowers arranged in compact conical heads; cœlestinum, delicate lilac; catawbiense grandiflorum, lilac shaded with rose; and Everstianum, a good old sort. The best white is certainly Mont Blanc. Among Azaleas, pontica princeps—yellow slightly suffused with orange—was by far the most conspicuous. Of deep-coloured kinds, A. coccinea major is excellent.

RAISING AND TREATMENT OF SEEDLING NARCISSUS. — Edward Leeds, Esq., having paid considerable attention to this process, the following is the particular treatment pursued:—

" To obtain good varieties, it is needful the previous season to plant the roots of some of each kind in pots, and to bring them into the greenhouse in spring to flower, so as to obtain pollen of the late flowering kinds to cross with those which otherwise would have passed away before these were in flower. With me, the plants always seed best in the open ground. When the seed-vessels begin to swell, the flower stems should be carefully tied up and watched until the seeds turn black. I do not wait until the seed-vessel bursts, as many seeds in that case fall to the ground and are lost, but take them off when mature with a portion of the stem, which I insert in the earth in a seed-pot or pan provided for their reception. I place them in a north aspect, and the seeds in due season are shed as it were naturally into the pot of earth. I allow the seeds to harden for a month on the surface before covering them with half an inch depth of sandy soil. The soil should be two-thirds pure loam, and one-third sharp sand; the drainage composed of rough and turfy soil. In October, I plunge the seed-pots in a cold frame facing the south, and the young plants begin to appear in December and throughout the winter according to their kinds and the mildness of the weather. It is needful, in their earliest stages, to look well after slugs and snails.

"The seedlings should be protected from frosts, but should have abundance of air, or they will soon draw. As soon as they will stand exposure, plunge the pots under some sheltered wall or hedge, and they will form their first bulbs. Let them become dry in summer, and, if it be a wet season, turn the pots on their sides until the time for them to grow again. Let them remain in the seed-pots, and topdress them with fresh loamy soil. When the bulbs are two years old, prepare, in an open airy situation, a bed of good loam mixed with sharp sand; prepare the bed as for Tulips, &c., covering the entire surface with sand, in which the bulbs should be embedded; plant the roots in rows three inches apart, and each root one inch apart in the row. They will stand three years in this bed, when they may be finally removed into a fresh bed of similar soil to flower: a few will flower the fifth year, but the greater portion not until the seventh. I do not take up the flowering roots oftener than every third season, but top-dress the beds every autumn. A little thoroughly-decayed hotbed manure, mixed with the surface soil, aids them to produce fine flowers, but it must be well decomposed or it will do harm. The beds should be well drained, the prepared soil at least two feet deep, and the situation sheltered from north and east winds, which do much damage to the flowers."—*Magazine of Botany.*

LONDON FLORAL INSTITUTIONS.—The *Horticultural Society's Garden at Chiswick* is annually receiving considerable improvements, both in the houses, grounds, and management of its contents; and a visit alone will confirm the advance that has been made the last and present year. Facilities, too, for admission to the gardens, and a much less expense is now required for the payment, on being elected a Fellow, and subsequently, too. There are also improved arrangements for exhibitors at the general shows, and the fact of their approval by exhibitors has been testified by the productions and commendations of this season's exhibitions. The collective specimens shown this season have been much in advance of former years, and to this fine display, there is, this season, the magnificent one of Mr. Waterer's Azaleas and Rhododendrons, which are still in bloom.

The *Royal Botanic Society's Garden* in the *Regent's Park* now has a plantation of Roses, Messrs. Lane, Paul, and Rivers having contributed collections to be bloomed there, after the manner of the Azaleas and Rhododendrons, each having the management of their own collection, and, if found necessary, they are to be shaded when in bloom. There is, as usual, a fine display with the Rhododendrons and Azaleas.

The *Royal South London Floricultural Society's* exhibitions are very much improved during the last two seasons, and in what are termed *florists' flowers* they are greatly in advance of the Horticultural and Royal Botanic exhibitions.

The formation of the *National Floricultural Society*, for testing the merits of hybrid flowers, &c., is an useful acquisition, and its regulations are much preferable to any that have preceded it with which we have been acquainted. The Society has not calculated upon pleasing everybody, and already there are fault-finders, who direct attention to glaring defects in certain flowers that have had high encomiums given to them; we know of none, and think such remarks are uncalled for. It by no means follows, that no flower is of *excellent quality* because it has not been presented at this Society's meeting and had such approval, but we think none that are of an *inferior* character will have the recommendation of the censors.

Auriculas.—The following new seedlings are said to be of first-rate excellence, and ought to be in every select collection:—

Beeston's Apollo.—Ground colour a very rich dark, and regularly edged with a lively green. The proportions are remarkably correct and handsome. *Lightbody's Richard Headly.*—A grey-edged variety, the ground colour is *black*, and the paste good; very superb.

Polyanthus.— *Wheatley's Lord John.*—Flower large, very dark ground, rich yellow edging, and a perfect circular centre. A new and superb variety, deserving a place in every collection of these lovely flowers. *Bellis perennis plena.*—The new German and Belgian varieties, comprising 130 named kinds; many of them exquisitely neat and handsome, are admirably adapted for edgings inside of flower beds, or to form an edging alone, or grown in patches in the borders, or in pots. If one bed had an edging of crimson, another of white, rose, scarlet, mottled, and other striking shades of colours, they would have a pretty effect. And their perpetual blooming increases their merit.

Newly Broke Tulips.—When seedling Tulips bloom the first time, the far greater part come a *self colour*, excepting the base, which is either yellow or white. They are said to have *broke*, when instead of coming a self-colour, they come *with stripes*. Mr. Goldham, of Islington, is denominated the father of the Tulip fancy, and this season many of his seedlings have broken, and several of them possess properties of first-rate excellence, exquisitely beautiful, and most strikingly distinct from any others. *Mr. Smith*, a newly-broke seedling, was shown at the Surrey Gardens. It is a Byblomen, possessing very good properties. Another, named *Princess Helena*, a Rose.

Erythrina crista gallii.—This noble blooming plant is worth every attention that can be given to its culture. I have seen but few cultivators of it who grow it as it is capable of. There are many plants, which to cultivate aright require to be shifted once or more during the growing season, and it is necessary to pot off into a small sized pot at first. Now this kind of treatment with the Erythrina crista-galli injures it, tending to check the growth of the spikes of flowers, and they are thus cramped and stunted. The method I pursue is: I cut down the stems a little while after the bloom is over, and gradually withhold water, and but just keep it from dust, giving it a season of rest till February in a greenhouse. At this period I place it in a bark pit, and cause the buds to push; I then repot it into a *much larger* pot than it grew in the previous season, and in this it blosom. I give a liberal drainage, and the compost is of equal portions of good turfy loam, turfy peat, and well-rotted cow dung and leaf mould, with a liberal sprinkling of bits of charcoal, having them well chopped together. During the growing period I water well once a-week with liquid manure, and the general supply is soft water from a shallow pond, drawn off into a tank in the stove. I have had a plant thus treated, which grew nine feet in one season, and half its length was adorned with its gorgeous flowers. The best method of increasing it is when the young shoots are about three inches long. I cut away all superfluous ones, and cut close to their origin; such being inserted in equal parts of loam and silver sand, and having a gentle bottom heat, soon strike roots.—*E. Barker*, *Winster Gardens.*

Nemophila maculata.—We lately saw several rows of this very beautiful flowering annual in *great vigour*, and profusely blooming in the garden of Mr. Lockhart, at Parson's-green. The soil is a rich strong loam, and the seed was sown thinly in rows as early as February. Last year we saw attempts to have large beds of it in the Chiswick Gardens and at other places, but in consequence of having been raised in a higher temperature, as a hot-bed, &c., and afterwards planted out in the beds, it failed in every instance we saw attempted. Treated, however, as our old common annuals are, and sown early, it flourishes admirably, and is one of the loveliest plants. We lately saw a star-shaped bed, filled in the following manner, which had a charming appearance. The centre circle was filled with Scarlet Verbenas, and the angles of the star had alternately the N. maculata and N. insignis. All were in fine bloom, and had a striking effect. Mr. Beaton recommends having a bed of the two species mixed, two of the maculata to one of the blue insignis, and so disposed at equal distances. The mixture of the flowers, he states, has a very pretty appearance.

Night-blowing Cereus (C. grandiflorus).—This delightful plant, which has for many years past bloomed profusely here, was last evening quite an object of admiration. No less than seventeen fully-expanded blossoms were open on it at one time. The flowers, which are very fragrant, began to expand about six o'clock P.M., and by eight o'clock they were fully developed. The plant occupies a pot fourteen inches in diameter, and has produced annually between twenty and thirty flowers for these last five years.—*Joseph Nickson, Gardener to Viscount Middleton, Godalming.*

CEANOTHUSES.—Among the many recent introductions of hardy plants into our gardens, there are none perhaps more effective or better adapted for covering walls than the Ceanothuses. We have here (Osborne) fine specimens of the following, which were planted on a south wall in the spring of 1848, and withstood the severity of the winter of 1849 without protection uninjured; viz., C. dentatus, C. papillosus, C. rigidus, C. cuneatus, and C. sp. California. I beg to offer a few remarks on the mode of culture as practised here. 1st. C. dentatus: I consider this to be the most beautiful of them all; the extreme neatness of its foliage, the beauty and profusion of its flowers, cannot fail to render it an object of universal admiration. Our plant, which is six feet nine inches in height, is now coming into bloom; it is trained on the horizontal system; the extent of its branches at the bottom is nine feet six inches, gradually decreasing to the point of the main stem. After it has done flowering, we shorten back the secondary branches to within an inch or so of the main laterals; this we repeat two or three times in the course of the season, according to the growth they make. It may be well to mention that the last pruning must not be performed too late, as on these branches we depend for the principal supply of flowers in the following season. This plant matured seeds last season, which were sown early this spring, and the plants are now coming through the soil. 2nd. C. papillosus: I consider this next in superiority; it will endure similar treatment to the former, but it is more vigorous in its growth—a great acquisition in a wall plant. Our specimen, which is just coming into bloom, is nine feet in height and ten feet in extent of branches at the bottom, gradually diminishing to the summit. Seeds of this also ripened last year, and are in the same stage as those just mentioned. 3rd. C. sp. from California: This is more vigorous in its growth than papillosus; it produces laterals freely, but not secondary branches. Our plant, which is thirteen feet in height and eleven feet in extent of branches at the bottom, has not flowered with us yet. 4th. C. rigidus: This is a charming species. Our plant, which is six feet nine inches in height, and in extent of branches eight feet six inches, has been a dense mass of bloom, the beauty of which is now past. It does not produce laterals so freely as the other species, nor does it show any disposition to produce seeds, though it has flowered two seasons. 5th. C. cuneatus: This has not flowered with us at present, consequently we cannot say much respecting it, but its appearance is very promising. This plant is seven feet in height and eight feet in extent of branches at the bottom. In its growth it is similar to rigidus and sp. from California.—*C. Winchester, Osborne Gardens.*

REMARKS ON DIAGRAMS OF CARNATIONS, &c.—In reply to the remarks of "Fairplay," which appeared in your April Number, I have to request the insertion of the following in your publication:—

I should not have troubled you or your readers with any explanation had your correspondent refrained from charging me with telling an untruth; but I feel called upon, in vindication of my character for truth and honesty of purpose, to refute the calumny.

Your correspondent proceeds to misconstrue the words of my letter, and accuses me of finding fault with the work in which the diagrams appear, which I most positively deny: there is not a word about the merits or demerits of the work itself. I referred to the drawings and diagrams only. He then asserts that I have told an untruth, and states "But I shall not quibble on straws—the petals *are not of two different* widths; it is simply an untruth; [No doubt he meant only a miscalculation.—EDITOR.] but it would not alter the case." Those are his words, and I beg you will print them, with the italics, precisely as in his own article. Now let us see who has told an untruth.

Take the diagram of a perfect Carnation, as it is called. The upper guard petal in the plate is within a trifle (under or over) one and a half inches broad, at the junction with the two adjoining petals; the compasses being placed on the outer edge of the diagram at the points of junction. Of course this would not be the broadest part of the petal, if it could all be seen; but with this difficulty standing in my way, I can show to your readers who has told an untruth on this subject. The lower petal is the widest of the three other petals which imbricate and form the first tier; and although there is a perceptible difference in applying the compasses, between this and the two other imbricating petals (which, by the way, is of itself a refutation of the statement of your correspondent), I can afford to select the broadest for him, and at the broadest part shown it is only one inch and three-eighths. Now, Sir, I ask you candidly, whether I committed myself by telling an untruth, when I stated the petals on the same tier were of two widths? Observe, if the two petals could be separated from the rest, and measured at the broadest part of each, the difference would be considerably more.

But as your correspondent has made such a repetition of the excellency of the work entitled "The Properties of Flowers and Plants," he will have no objection, I presume, to my referring to that work (*particularly if he is related to the author*), although it should be found to disagree with the diagrams. The author states,—"there should not be less than five or six rows of petals laid regularly, and the flower should rise and form a good bold centre or crown; and in quantity should form half a ball." "The petals should be stiff and slightly cupped." And yet it is now asserted that neither seven tiers, or forty-two petals, or more if they could be obtained, would be too many! Perhaps not, if we had more "Professors of Dressing the Carnation and Picotee" than we have at present. A rosette, too, is now preferable it seems to "half a ball;" verily this is like G. G., or Glenny improving upon Glenny!

I had no intention of interfering with or alluding to the "Properties of Flowers and Plants" in my article in the Midland Florist, nor do I now think I did. What I referred to was, the different width of petals on the same tier in the diagrams, which are not published in that work, although your correspondent intimates they have been published and approved many years. I have a copy of the second edition, 1847, on the cover of which is printed "The only authorized Edition." How am I to blame if the diagrams are not in this work? but even if they were published ten years ago, and by the very author of that work, I still maintain they are incorrectly drawn. I think the majority of Carnation growers would not only admit the correctness of my remarks on the diagrams generally, but also that they would agree with me that the amount of colouring shown in the Carnation is insufficient, the white ground predominating. Here again there is a marked difference between the diagram of a Carnation, and the author of "the Properties'" idea of a perfect petal of a Carnation, published by him in the "Annals of Horticulture, 1847;" where the outer portions of the white ground do not rise to the top of the petal as in the diagram, consequently a flower composed of such petals would only show two stripes of white, and three of the coloured; or if the outside portions of the white were seen, they would be very narrow; in fact they would not be seen unless half as much more of each tier of petals, as shown in the diagram, were visible; but the diagram shows nearly double the quantity of white. Now let me ask the said author which is correct, the perfect petal in the "Annals of Horticulture, 1847," or the diagram in the "Gardeners' Magazine of Botany, 1850?" It is of no use saying they are from the same "model," as there is a manifest difference between them; and if the "model" is or is to be mechanically true, then I submit there should be no difference between such part of a petal as is visible when in its place in the perfect flower, and when it is shown separately.

Perhaps the aforesaid author will at the same time favour us with his reasons for omitting the proportions of colours for a perfect Carnation in his "Properties of Flowers and Plants," and state what is his present idea of perfection in that respect. I can further venture to say, that if it is in accordance with the diagram, it will not do for such youngsters as myself and many others, although we may be "half a century behind in our floral knowledge;" and, that your correspondent cannot find his boasted "hundreds of better florists than I ever can be," to admit that it is a correct standard; to this I challenge him, and will submit to the evidence being taken by circulars addressed to every individual grower that can be found in the kingdom by some indifferent person.—*Benj. Vialls. Derngate, Northampton.*

THE BOTANIC GARDENS OF MADRID AND VALENCIA.—The garden at Madrid, founded in the second half of the past century by Charles III., a king who was fond of the arts and sciences, is the principal botanical institution in Spain: it has again revived, after being almost entirely neglected during a long series of years, and promises to become in time a garden of importance. This state of things is not much due to the Government, which does almost nothing for the garden, though belonging to the Royal domains, nor yet to its direction, but is owing to Professor Vincente Cutanda's indefatigable zeal in restoring the establishment, without being himself a professional botanist (for he was formerly a barrister); and he would be still better enabled to effect his object, if he had the entire direction of it. But this last is, unfortunately, not the case; neither he nor the two other professors have any share in the direction, which belongs exclusively to the Gefe local del Museo nacional de Ciencias. The garden, with its botanical museum, forms part of the national museum just named, whose chief director is the celebrated zoologist, Professor Don Mariano de la Paz Graëlle, a Catalonian; and under whom an English gardener (Jardinero mayor) is placed. This person, who is said to know very little of his profession, enjoys nevertheless a much larger salary than any of the three professors attached to the garden. One of these is the abovementioned Don Vincente Cutanda, professor of organology and physiology, and director of the botanical museum: another is Don Pascual Asensio, professor of agriculture and inspector of the agronomical branch of the botanical museum; and the third is Don Jose Alonso y Quintanilla, professor of descriptive botany, who conducts also botanical excursions, as well as exercises in determining plants. Of these three gentlemen the first is a tolerably good botanist, well acquainted with the progress and literature of the science, and, although past forty years of age, is still full of youthful ardour and attachment to botany, and devoted to it from his youth from inclination.

The botanical museum is placed under the immediate direction of Cutanda. It comprises, besides the agronomical branch already alluded to, consisting of a library and a collection of models, woods, cerealia, and fruits—the botanical library, the herbariums, and the store of seeds. The library, which is well arranged, is seemingly complete as regards the older works, but it is poor in more recent publications. The seed-store is arranged according to the Linnæan system, and has an especial seed-collector (semillero), who gathers the seeds in the garden, and distributes them among other gardens, He stands under Cutanda, who is the director of the garden of Madrid, only as regards corresponding with other gardens, which are connected with it by exchanging seeds, superintending generally the garden cultivation, and enriching it with new species, but he has nothing to do with the cultivation itself. The herbariums constitute the most important portion of the botanical museum; those of Cavanilles, Rodriguez, Née, Clemente, part of the collections of Lagasca, Pourret, and others, being kept there; likewise many plants of Boissier and Reuter, some gathered by the writer of this notice, and by several of the pupils of the botanical institution. All these collections were lying in the greatest confusion in Rodriguez's time, so that it was utterly impossible to compare any plant, or examine any particular original specimen. Cutanda has made it a point of primary importance to introduce some order into this chaos, after four years of constant exertion, aided by the semillero, Don Francisco Alea, a young, zealous, and clever botanist. All the said collections form now one general herbarium, of about 30,000 species, arranged according to De Candolle's method. The specimens of each species, in the several herbariums, are placed separately in sheets of paper, having a printed label with the name of the herbarium attached; and a detailed catalogue renders the search after any particular species very easy. Cutanda is now engaged in determining all the species in this general herbarium, from first to last, because there are many plants in it, either not at all, or wrongly named. It is likely to obtain soon a very considerable addition in Lagasca's herbarium, which the Government intends purchasing. One portion of this latter, consisting of some hundreds of packets, is in the natural-history building; the other, in about twenty cases, lies at the Custom-house in Malaga, where both have continued many years, because Lagasca's heirs, who are uneducated people, caring nothing about botany, have declined to defray the expenses of warehousing the collections.

The number of cultivated plants in the Madrid garden very little exceeds 5,000 species. The catalogue, published in 1849 by the three professors, at their own expense, comprises 3,780 species,—that is, such only as they were able to determine since the death of Rodriguez, which took place in the summer of 1847. He had—it is impossible to guess for what reason—removed all the labels of the plants! Cutanda takes much pains to increase the number of plants, and is particularly anxious that the Madrid garden should cultivate all the plants of the peninsula. As a member of the Comicion de la Carta geologica de Espanna (which chart, at present merely an accurate geognostic-botanical one of the province of Madrid, is to be published at the charge of the Government) Cutanda is obliged to undertake annual journeys, in order to study the vegetation of the country; on which occasion, he is always accompanied by the semillero, who collects seeds and plants for the garden. If this honest, zealous, and disinterested young man is long spared, the Madrid garden may be expected gradually to recover the rank it held in Cavanilles's time. Last year the government built a hot-house, which was hitherto entirely wanting. It is still more to be wished that a better supply of water could be obtained; at present it is scarcely adequate for watering one-half of the very considerable area of the garden, especially in summer.

What is hoped for in regard to the Madrid garden, has partly been accomplished in that of Valencia. When the author visited it for the first time in 1844, it was only nominally a botanical garden, in which little more was cultivated than oranges, limes, roses, and common ornamental plants; whereas it is at present in tolerable order, and contains more than 6,000 species. There is a pretty large glass-house, one-half being a caldarium, the other a tepidarium: in the former are cultivated nearly 130 species of Orchideæ, and 50 of Palms; in the latter, among others, a considerable number of tropical and subtropical Ferns. A second house is to be erected in the course of the present year. A number of Crassulaceæ and Cacteæ, and similar plants of New Holland and the Cape, grow in the open air. The general number is constantly augmenting, and everything is done to cultivate plants of colder climates than the Valencian, by means of watering, artificial rocks, shrubberies, &c. This sudden and advantageous change in the state of things is almost exclusively due to the then Rector of the University of Valencia, Don Francisco Carbonell. This learned, energetic, and wealthy gentleman, was political chief of Valencia in 1844, and was much dreaded throughout the kingdom, on account of his inflexible and rather despotic procedure; but he made it a point, it seems, to restore, at any cost, the university garden. Though a diplomatist, and not a botanist, he interests himself actively in natural history, especially zoology and botany. The hitherto very insignificant zoological museum of the university was considerably enlarged during his rectorship; for instance, the indigenous birds of Valencia, especially the numerous water-birds of the Albufera Sea, have been added, and form a very interesting collection. The director is Professor Don Ignatio Vidal, who is said to be a good zoologist. But Carbonell's real hobby is the botanic garden. He has removed, somewhat arbitrarily, the old *personnel*, with the exception of D. José Piscueta, Professor of Botany, who was garden-director in 1844, and continues so still, though, of course, only nominally; and he has attached to it a clever, scientific French gardener, M. Jean Robillard, a zealous young man; and as the public funds were too insignificant to restore and support the garden, he has contributed large sums out of his own means. M. Robillard has placed himself in communication with the leading gardens in Europe, and will be able, under the powerful patronage of Carbonell, to double and treble the number of plants in a short time. If we take into account the excellence of the climate of Valencia—in which New Holland and Cape plants, as well as many plants of tropical countries, thrive in the open ground—the superiority of the soil, the abundant supply of water, the continually moist and never-too-hot air—it must be admitted that we have here a combination of all the conditions required for a grand botanic establishment; and such the Valencia garden will become, if Carbonell's life is spared and his rectorship continued. I will, in conclusion, specify some of the rarities in the garden; rarities, at least, as concern the individual specimens. The large water basin is filled with tropical aquatics, such as several plants of Nelumbium speciosum in full bloom at the time I speak of (August), and remarkable on account of the great size of the flowers and leaves. In the open air grow small trees of Gleditschia caspica, the stem of which is armed with compound spines a span long; Parkinsonia aculeata; Araucaria excelsa and imbricata; and a splendid specimen of Yucca filamentosa, with a stem eight feet high and nearly one foot thick. The Parkinsonia is a layer from an old large tree, which was ignorantly cut down by the Canôn Carrascosa, formerly director of the agronomical garden, now united with the botanic garden. The Chamærops humilis, which so much astonished me in 1844, is fortunately still in existence, and it measures nearly twenty feet in height. The proper "botanical school" remains still a Linnæan arrangement, but it is intended to put it in order according to the natural system. May the Valencia garden continue its progress towards perfection, and serve as a praiseworthy pattern of imitation for all the other botanical establishments in Spain!—*Hooker's Journal of Botany.*

THE EXHIBITION OF TULIPS AT MANCHESTER, 1851.

BY DAHL.

The readers of the Floricultural Cabinet will remember that in the July number of last year, I gave a report of the northern exhibition, held at the Corn Exchange in this town. It was then decide by the Committee that the meeting for 1851 should be held at Derby In the interim there has arisen a little misunderstanding between som of the exhibitors and the Committee, and the result has been (thoug there has been for some years an exhibition in this town,) that thi year the show should be of greater magnitude. This meeting wa held on Friday, May 30th, at the Belle Vue Gardens, a very prett place of resort, about three miles out of the town, a place very appropriate for the purpose. The Tulips were placed in a covered tent upwards of fifty yards in length, and I am pleased to report that it wa an imposing sight. A table fifty yards long, covered with blooms, wa a display that *only a Tulip fancier can duly appreciate.* The whol was far superior to the grand northern gathering of the last year.

It really is a pleasure to see that the cultivators around Manchest are making a rapid stride in the march of improvement, and at thi exhibition they came out well, which, with a few exceptions, would no displease the *most fastidious fancier*, and even those few exception appear to be more the clinging to old associations than a wish to b diverse from the rules laid down in the southern parts of the country.

The prizes were as follows:—

One Pan, to which a pint Silver Taukard was awarded.

Queen Charlotte.
Louis XVI.
Polyphemus.
Charles XII.
Unique.
Heroine, *extra fine*.

Feathered Bizarres.

1. Charles XII.
*2. Lord Lilford (Crompton's)
*3. Magnum Bonum.
*4. Sans Joe.
5. Surpass Catafalque.
6. Slater's Prime Minister.
7. Passe Perputa.
8. Duke of Savoy.
9. Trafalgar.

Flamed Bizarres.

1. George IV.
2. Polyphemus.
3. Sans Joe.
*4. Shakspeare.
5. Lustre.
6. Duke of Devonshire.
7. Albion.
*8. Lord Stanley.
9. La Cantique.

Feathered Byblomens.

*1. Bienfait Incomparable.
2. Baluruc.
3. Buckley's Beauty.
4. Incomparable Surpassant.
5. Kossuth.
*6. Baquet.
7. Lancashire Hero.
*8. Gibbon's Seedling.
*9. Violet Amable.

Flamed Byblomens.

*1. Queen Charlotte.
*2. Roi de Siam.
3. Bienfait.
4. Atlas.
5. Incomparable.
6. Democrat (Dixon's).
7. David.
8. Violet (Walter's).
9. Black Baguet.

Flamed Roses.

1. Unique.
2. Vesta.
*3. Triumph Royal.
4. Lady Crew.
5. Aglaia.
6. Compte de Vergennis.
7. Guerrier.
8. Lord Hill.
9. Camillus.

Feathered Roses.

*1. Heroine.
*2. Compte.
*3. Aglaia.
*4. Lady Crew.
5. Wilmer's Prince of Wales.
6. Bion.
7. Andromeda.
8. Lady Lilford.
9. Duke de Bronté.

Rose Breeders.

1. Lord Derby.
2. Lady Suffield.
3. Andromeda.
4. Catherine.
5. Jackson's Rose.

Byblomen Breeders.

1. Unknown.
2. Gibbon's Seedling.
3. Lady Seymour.
4. Sancta Sophia.
5. Bacchus.

Bizarre Breeders.

1. Prime Minister.
2. Polyphemus.
3. Masterpiece.
4. Abdolonimus.
5. Unknown.

Selfs.

1st.
White Flag.
Roi de Mine d'Or.

2nd.
Alba Perfecta.
Strong's Yellow.

Those marked thus (*) were splendid blooms.

Among the blooms exhibited was Crompton's *Lord Lilford*, a feathered bizarre, a northern seedling, finer this season than I have ever seen it before, and will become a useful and popular flower. *Lady Lilford*, a feathered rose, another northern, was conspicuous, and will be prized. *Queen Charlotte*, an old northern, and Gibbons' *Sable Monarch*, are two of the best heavy-flamed byblomens that the north has produced. Slater's *Prime Minister* is another northern gem, and is a new broke feathered bizarre, in the style of Walker's *King* in its best state, but antagonistic to that flower; it is steady in its habit; the only drawback in the bloom shown was that the three outer petals had suffered by the frost. *Bienfait*, *Heroine*, Buckley's *Beauty*, *Lord Stanley*, and many others, were in fine state, and fit for the most fastidious gaze. Conspicuous in the group was Alexander's *Monarch*, a fine feathered bizarre, but, owing to some little defect, it did not gain a prize; it must become a favourite. There were some flowers shown under wrong names, which is not to be wondered at when it is taken into consideration that some of the exhibitors were poor men, but to their credit can grow a Tulip fit for competition, and can take a pleasure in employing their spare time over their Tulip-beds, instead of wasting it at the beer-shops. [Very highly to be commended.—EDITOR.] Who can with pleasure join in chorus with the poet when he sings—

"Not a tree,
A plant, a leaf, a blossom, but contains
A folio volume. We may read, and read,
And read again, and still find something new,
Something to please, and something to instruct."

ORIGIN OF SEVERAL VARIETIES OF MOSS ROSES.

BY MR. H. SHAILER, CHAPEL NURSERY, BATTERSEA FIELDS, LONDON.

On the first introduction of the old red moss rose, in or about the year 1735, it was sent over with some plants of orange trees, from the Italian States, to Mr. Wrench, then a nurseryman and gardener, at Broomhouse, Fulham, the same land being now in the occupation of the descendants of that family, the Messrs. Fitch, extensive market gardeners, &c. It remained in that family nearly twenty years, without being much noticed or circulated, until a nurseryman, named Grey, of the Fulham nursery, now Messrs. Osborn's, brought it into note. The first production of the white moss rose, which took place in the year 1788, was from a sucker, or underground shoot. My father, Henry Shailer, nurseryman, of Little Chelsea, an extensive grower of moss roses, perceiving it to be a *lusus naturæ*, from a stool of the red moss, cut it off, and budded it on the white Provence, or Rose La Blanche Unique. The buds flowered the following season a pale blush. He budded them again the next season, when the flower came much whiter. It was then figured in *Andrew's Rosary*, under the name of Shailer's White Moss. He then sold it out, the first plants to Lord Kimbolton, then to the Marquis of Blandford, Lady de Clifford, the Duke of Gloucester, &c., at five guineas per plant. He continued to sell at that price for three years; he then entered into a contract with those highly respectable and extensive nurserymen, Messrs. Lee and Kennedy, of Hammersmith, they taking as many plants as he could grow for three years, at 20*s*. per plant, binding him not to sell to any one else under 42*s*. per plant. After cutting down the shoots which produced the white moss, the plant threw up two weak shoots, which he budded from; they flowered the second season from the buds, and that was the birth of the striped moss rose, a most beautiful and delicate variety, but when grown very strong, apt to go back to the original parent. The first production of the single red moss rose, 1807, was a sport of nature. My father sent some plants of moss roses to a nurseryman, named Essex, at Colchester, and on the receipt of a letter from that person, I went with my father to see the plant when it was in bloom. I took some cuttings away with me to bud, and the following autumn fetched the original plant to our nursery, at Little Chelsea, from whence we sent the first plants out, at 5*s*. The old scarlet moss rose, which is a semidouble, first flowered in 1808, on a plant given by my father to his brother, F. Shailer, of Cook's Ground and Queen's Elm, Chelsea. The first production of the Moss de meux was from a sport of the old De meux, in the neighbourhood of Bristol, but brought into a high state of perfection by Messrs. Lee, of Hammersmith. The Sage-leaf

Moss Rose I must claim myself. It was a sport of nature. I discovered it on a Sunday afternoon, in the month of June, 1813. I sold the whole stock to Messrs. Lee, of Hammersmith. It has a delicate shell-like form, and is a beautiful blush; now nearly extinct. On the first known production of La Blanche Unique, or the white Provence, it was discovered by Mr. Daniel Grimwood, nurseryman, of Little Chelsea. He was on a journey of business, in the county of Norfolk, in the month of July, 1775, when riding very leisurely along the road, he perceived a Rose of great whiteness, in a mill; he alighted, and on close inspection, discovered it to be a Provence Rose. He then sought an interview with the inmate of the mill, who was an elderly female, and begged a flower, which was instantly given him, and in return he gave her a guinea. In cutting off the flower he cut three buds. He went to the first inn, packed it up, and sent it direct to my father, who was then his foreman, at his nursery, Little Chelsea, requesting him to bud it, which he did, and two of the buds grew. In the following autumn he went down to the same place, and, for five guineas, brought the whole stock away. He then made an arrangement with my father to propagate it, allowing him 5*s*. per plant, for three years. At the expiration of that time he sold it out, at 21*s*. per plant, my father's share amounting to upwards of 300*l*. Mr. Grimwood sent the old lady at the mill a superb silver tankard, &c., to the amount of 60*l*. The Shailer's Provence, or Rosea gracilis, so named by Messrs. Lee, was raised from seeds of the Spineless or Virgin's Rose, sown by myself in 1799, and flowered in 1802. We raised numerous varieties from seed up to 1816, and generally sold them to Messrs. Lee, who sent them out under their own naming.—*Extract from Practical Gardener.*

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

JULY is proverbially a hot and dry one, it will therefore be highly necessary, during the continuance of dry weather, to administer copious supplies of water. This should be done towards the evening of each day, because the plants have then time to absorb the water gradually, and appropriate such portion as contributes to their well-being. It is only in extreme cases that water should be given in the morning, because it is then so quickly exhaled from the soil, as well as the leaves, that its refreshing and nutrimental properties are almost wholly wasted. Rain-water is best, or that from an exposed pond or tank. Where beds of plants have been repeatedly watered through a rose, the surface of the soil will probably have become *crusted* and almost *impervious* to moisture; consequently they ought to be stirred over occasionally with a small fork. Continue to make up any deficiencies in the beds. A few annuals, as Mignonette, &c., may now be sown to bloom in the autumn, also biennials to bloom next year.

FLORISTS' FLOWERS.—*Auriculas* should be kept in the shade, and occasionally watered as necessary. At this season of the year the plants are often attacked with green fly, which should be removed with a camel-hair brush, or dip the plants in a solution of tobacco-water. *Tulips* will have perfected their growth, and should now be taken up, as if allowed to remain too long it invariably acts prejudicially on the bulb. *Ranunculuses* will require to be taken up as soon as their foliage has become withered and dry, and the roots preserved in bags. *Pinks* may still be piped, if not already done, as recommended last month. *Carnations* and *Picotees:* As the pods are fully formed and ready to open, secure them round with a ring of India-rubber, gutta-percha, or bass, to prevent their bursting on one side. When blown, they should be shaded. Never suffer the plants to flag for want of water. Proceed with layering. *Dahlias* will require *thinning out* freely as they advance in growth. In dry weather give water very freely, and if the plants are sprinkled overhead late in the evening with a fine rose or syringe, their luxuriance will be greatly promoted. Trap earwigs by all possible means, on the principle that prevention is better than cure; they will not be wanted when the blooming season comes on. *Pelargoniums* that have shed their flowers should be cut down, disrooted, and potted in smaller pots, keeping the plants for a week in a close frame, to assist them in developing their new shoots. *Roses* may now be budded, moist weather being best for the operation. It is of importance that there should be a resemblance between the bud and the stock as to the vigour of vegetative growth, in order to ensure a successful result. If a Rose of slow development is budded on a rampant briar, and all the strength of the latter is turned into the parasitical stranger, health cannot be maintained, nor will a freely vegetating Rose submit to be impeded in its progress by a sluggish stock. Thin away surplus branches from all stocks not budded as early as possible, not to wait a day even, but get the branches left strong and healthy.

IN THE FORCING FRAME.

Where stove and greenhouse plants afford suitable cuttings, propagation may still be pursued; as, generally speaking, it can be practised with greater success in the early than in the latter part of the year. It should be remembered that the propagation of most plants is facilitated by the employment of bottom-heat and bell-glasses. Stove plants will derive great advantage from a partial shading during the glare of the day, and will be less liable to injury from drought. Many plants that have made vigorous growth will require shifting, especially such as Justicias, Clerodendrons, &c. Give plenty of water at the roots, syringe often in the evening, and keep the floors of the house and every part damp, to assist in maintaining a humid atmosphere; it is surprising the amount of evaporation going on at this season. Bulbs of Amaryllis, and other stove and greenhouse plants, can be put together in a pit or frame, where they will be near the glass, and where the influence of the sun, with a gradual diminution of water, will mature them. Never permitting the foliage to flag is a good criterion as to the quantity of moisture required, and they may be kept as near that state as possible.

IN THE GREENHOUSE, &c.

As a free ingress of air must necessarily be permitted during fine weather, its rapid circulation, conjoined with active solar heat, must cause a rapid evaporation both from the plants and soil; hence there exists a necessity, under the above circumstances, of watering and syringing frequently. However beneficial a screen may be during bright hot weather, its presence is not required while the sun is obscured. Encourage the growth of Azaleas and Camellias by keeping them comparatively close (with shade during sunshine), and supplying them liberally with moisture administered by the syringe. As probably increased room will be obtained by the removal of many plants to the flower-beds, the space might be appropriated to the cultivation of plants of the commoner sort, for an autumn display. The pits will be found useful for many hard-wooded greenhouse plants, impatient of too much heat. Propagate Roses by cuttings from those plants which have been forced, and place the plants in a rather shady situation, in order that they may have a period of rest for a few weeks. Calceolarias that have ceased blooming should be re-potted; cut off dead tops, place the plants in a situation where they can be shaded from hot sun, admitting it morning and evening. Seed should be sown, so as to have the plants strong, to endure winter; such will bloom next season, and be much more vigorous than plants raised from cuttings. Cinerarias also that have done blooming should have the tops cut off, be fumigated in a close frame, as they are often affected with green fly; after which the plants should be turned out of the pots, and planted in a somewhat raised bed of good soil, in the garden. Sow seed now; the young plants will bloom early next spring. Epacrises, Ericas, &c., now done blooming, may be cut in, to render them bushy. The tubers of Tropæolums which have ceased blooming, and the tops withered, must be taken out of the soil, or be kept in a bag, &c., or the pot must be put aside, where it may have the soil kept dry till potting time. Greenhouse plants placed in the open air in pots should have frequent waterings at the under side of the foliage, to destroy or keep down green fly. Moss laid lightly between the pots keeps the roots somewhat cool, and tends to promote the health of the plants. Occasionally water the moss, if the weather be hot and dry.

SEEDLING PELARGONIUMS OF 1851.

The following superb varieties have been raised by G. W. Hoyle, Esq., of Reading:—

Remus.—Upper petals, dark clouded, margined with fine crimson; under petals bright pink, with a crimson spot in the middle of each; centre of blossom white. The petals are of good substance, the edges even, and the flower of first-rate form and excellence.

Magnet.—Upper petals dark clouded, shading off with scarlet crimson; under petals bright rosy scarlet, tinged at the lower part with violet and white; petals of good substance, and flower of fine form. The first prize (silver medal) was awarded for this flower at the Pelargonium Fund Exhibition, Regent's Park, June 11th. It had a first class certificate at the National Floricultural Society.

Ganymede.—Upper petals dark crimson-purple, with a narrow edging of rose; lower petals, beautiful pink; centre of flower, pure white. Fine substance and first-rate form. This obtained the fourth prize at the Pelargonium Exhibition, and a first-class certificate at the National Floricultural Society.

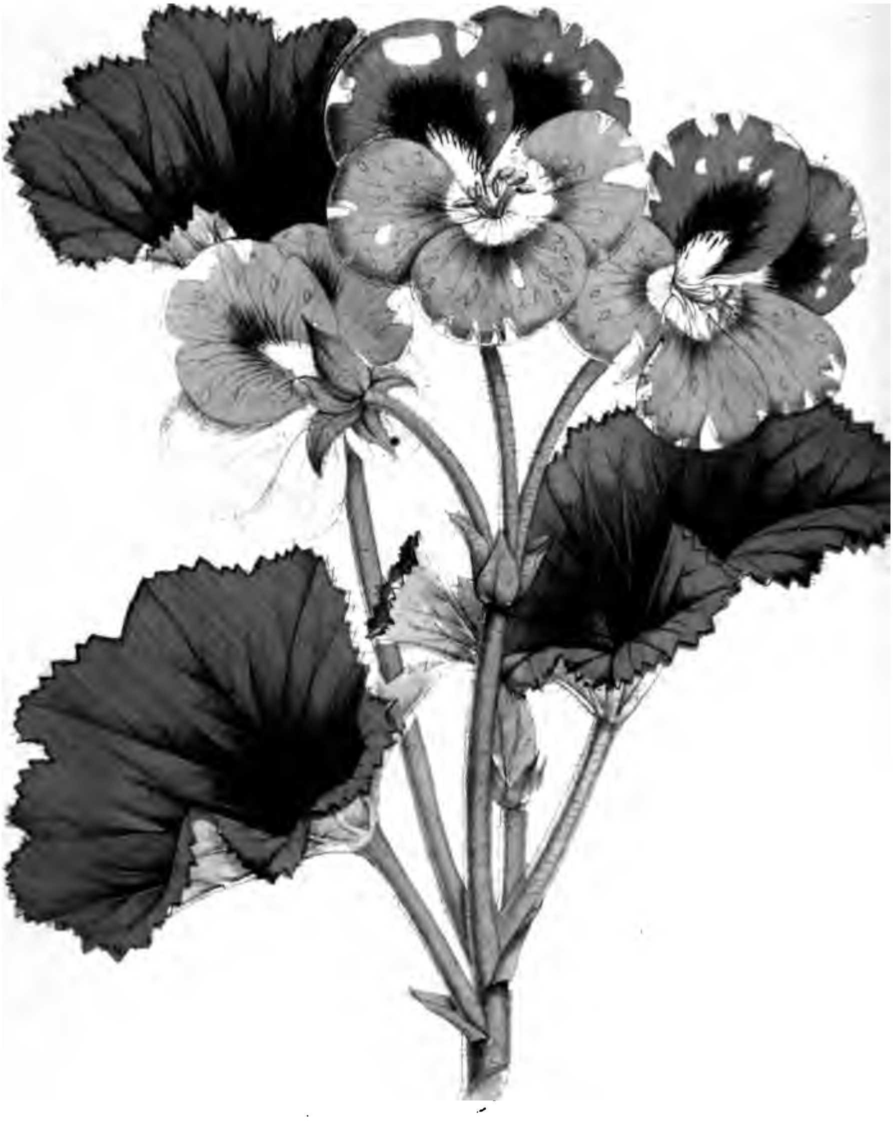
Blaze.—Upper petals, bright rosy-scarlet, with a dark crimson blotch, and a distinct narrow edging of rose; lower petals, bright flesh-colour; and a large white centre. Of good substance; very showy. Obtained the third prize at the Pelargonium Exhibition; a first-class certificate at the Royal Botanic, also at the National.

[illegible].—Upper petals very dark maroon, with a narrow edging of crimson; lower petals rosy-flesh colour, with a red spot in the centre of each; centre white. Very distinct and showy.

[illegible] of the Staffs.—Upper petals rich red, with a very dark blotch; lower petals a buff-red. Distinct and showy.

Hermia.—Upper petals rich maroon-crimson, with a narrow flesh-coloured edging; lower petals a pretty pale blush; centre white; very pretty. The seventh prize at the Pelargonium Exhibition.

Chieftain.—Upper petals crimson maroon, with a rosy-scarlet edging; lower petals pale rosy-red; a small white centre. Certificate at the National.



Pelargonium Roseum Striatum.

AUGUST, 1851.

ILLUSTRATIONS.

PELARGONIUM—ROSEA-STRIATUM.

THIS singularly pretty variety was raised by H. C. Wise, Esq., from whom it was obtained by Mons. Meillez, nurseryman, of Esquermes, near Lille, in France. We understand the variegation in the flowers is constant; from which circumstance we may expect, by hybridizing with others, a new section of novelties will be produced.

It is figured in Mr. Van Houtte's Flora, of whom, we suppose, as well as of Mr. Meillez, plants may be had, and it certainly deserves a place in all collections of fancy varieties.

The interesting article by our respected correspondent "Orion," continued on page 199 of our present Number, renders it unnecessary for us here to enlarge upon this beautiful tribe of flowers.

NOTES ON NEW OR RARE PLANTS.

ACACIA GRANDIS (THE GRAND ACACIA).—This very showy flowering species is a medium-sized shrub, with Mimosa-like foliage. The flowers are borne in profusion, each globe-shaped, and about half an inch in diameter. They are of a deep yellow colour. It is one of the handsomest of this charming tribe of plants, and ought to have a place in every greenhouse. Plants have been shown at the Regent-street Rooms of the Horticultural Society during the present season, and considered one of the most elegant. (Figured in *Mag. of Botany.*)

ACACIA HISPIDISSIMA.—A Swan River shrub, much branched, and of dwarf habit. The foliage is small, Mimosa-like. It is a most profuse bloomer, each blossom globe-shaped, half an inch in diameter, of a deep golden yellow. It is somewhat like A. pulchella, but even handsomer than that charming species. It merits a place in every greenhouse. (Figured in *Bot. Mag.*, 4588.) Among the gay flowering plants of winter and spring, this tribe of plants ranks with the most ornamental, and sheds a delightful perfume too. They are of very easy culture, and can be procured at a trifling cost.

Berberis Darwinni.—This very handsome Barberry is an evergreen, of moderate-sized growth, from three to five feet high, bushy. The leaves are small, of a rich deep green. The flowers, borne in profusion, of a rich deep yellow. It is quite hardy, and well deserves a place in every shrubbery.

Broughtonia lilacina.—This pretty flowering Orchideous plant is a native of the West Indies, we believe of St. Domingo. It is in the collections around London. Each blossom is near two inches across, of a pretty lilac colour, with a yellow streak down the centre of the lip. It has bloomed at Mr. Rucker's, and at Messrs. Henderson's, of Pine Apple-place. (Figured in *Magazine of Botany.*)

Cantua buxifolia (synonyme, C. dependens).—A very splendid plate of this handsome, flowery, half-hardy, shrubby plant is given in *Paxton's Flower Garden* for July, illustrative of which are the following particulars:—

" It is doubtless true that *Cantua buxifolia* is a *variable* plant, more or less downy, and having flowers either *crimson* and *yellow*, as this is, or *white* and *yellow*, or, perhaps, merely *yellow*. All these forms may be expected to appear from the same batch of seeds. In fact, among Mr. W. Lobb's dried specimens, no fewer than six different numbers are occupied by the forms of the same species, viz., this *C. buxifolia*. But the materials before us lead to the inference that other forms of the genus exist in temperate South America, which are specifically distinct from *C. buxifolia*, and from each other.

" In the first place we have a Peruvian plant, collected by Dombey, and distributed by the Paris Herbarium, under the name of 'C. grandiflora, No. 382.' This, which is nearly entirely smooth, has much shorter flowers and blunter leaves than *C. buxifolia*, the calyx being almost half as long as the corolla tube; it is probably *C. ovata*.

" Among Bridge's last Bolivian collection is a shrub with leaves and calyxes covered all over with a viscid glandular pubescence, an extremely narrow crimson-streaked corolla and calyx. This we presume to be *C. tomentosum.*

" Finally, we have in the same collection a species, with flowers growing singly at the end of short lateral branches, and calyxes almost half as long as the tube of the yellow corolla, and to this the name of *C. uniflora* seems to belong.

" These plants (and others) are likely to appear in our gardens, now that the importation of seeds has commenced into this country. They should be diligently sought for by those persons who have correspondents in Bolivia or Peru."

Epacris conspicua.—An hybrid seedling, raised by Mr. Kinghorn, gardener to the Earl of Kilmorey, at Twickenham. It has the habit and foliage of E. grandiflora; flowers large, *bright crimson-scarlet*, with a large white tipped end.

E. GRANDIFLORA-RUBRA.—Habit and foliage of E. grandiflora, and the large flowers of a *deep crimson*, tipped with white. Mr. Kinghorn's seedling.

E. KINGHORNII.—Habit and foliage of E. grandiflora. The tube of the flower is rather shorter, of a clear rose colour at the lower part, and paler upwards, with the tip of a pure white. Very neat and pretty. Mr. Kinghorn's seedling.

E. HYACINTHIFLORA CANDIDISSIMA.—Habit and foliage of E. variabilis. Corolla of a broad bell-shaped form, and of a pure white. Seedling of Mr. Story's. The four are figured in *Magazine of Botany.*

Both Mr. Kinghorn and Mr. Story have paid considerable attention to the improvement of this charming tribe of plants, and they have been amply repaid by the valuable hybrids which they have supplied the floral public with. There is still room for much more to be done. Why may we not have some of the habit of E. pulchella, with bright crimson, red, or scarlet flowers, and thus increase the beauties which are *summer bloomers;* and similar coloured ones having the habit and form of E. impressa, campanulata, &c., and thus improve the *winter bloomers?* Attempts to raise hybrids will be highly interesting, and the result satisfactory. Similar attempts with many other families of greenhouse plants would amply repay for every attention.

GLOXINIA PETOIANA.—A handsome hybrid, raised at Somerleyton Hall gardens, in Suffolk. The ground is white, and the upper and lower parts of the throat surrounded (as in G. Fyfiana) with a rich crimson-like colour. Messrs. Youell and Co. obtained the stock of plants.

NYMPHÆ RUBRA. THE CRIMSON WATER-LILY.—It is a stove aquatic from the East Indies. We recently saw it in fine bloom in the large aquatic house at the nursery of Messrs. Knight and Perry, King's-road, Chelsea. The flowers were eight inches across, of a rich crimson colour, which produced a pretty contrast with the flowers of other kinds then in bloom in the same house. It is very showy. (Figured in *Paxton's Flower Garden.*)

PELARGONIUM GOLDEN ADMIRATION.—One of the usually termed *Scarlet-Geranium* section. It has rich golden variegated foliage, a free bloomer, the flowers large, and of a brilliant scarlet.

P. BEAUTY OF THE PARTERRE.—Foliage green, with a very distinct dark horse-shoe marking. The plant is of dwarf habit, blooming freely. The flowers are of a bright salmon colour. Very pretty, and excellent for beds or pots.

P. BRIDAL BOUQUET.—The leaves have a green centre, surrounded with clear white; a free bloomer, having flowers of a deep crimson-scarlet.

P. PUNCH.—Foliage green, dwarf habit, and blooms very freely. The flowers are of fine form, of a rich scarlet, and borne in very large heads. It is a charming variety for beds or pots. There are some beds of it in the Royal Gardens of Kew, which surpass all others of its class.

P. JUDY.—Foliage green. Flowers good form, in large heads, of a pretty *rosy-salmon* colour. There is a bed of it at Kew, which has a very pretty appearance.

P. PEACH BLOSSOM.—The leaves are large, similarly marked to Lee's Flower of the Day. A free bloomer, flowers good form, of a salmon colour.

P. COMMANDER-IN-CHIEF.—The foliage is green, with a very pretty horse-shoe mark of velvet and yellowish red. The flowers are of a rich orange-scarlet, good form, and produced in *large* heads. An *excellent variety*, either for beds or pots, and very handsome in any situation. The young stems as well as flower-stalks are of a yellow-cream colour, almost *pure transparent*, and have a very pretty appearance.

P. PRINCESS ALICE (Ingram's).—The foliage entire green, similar to Lucea-rosea. The flowers are produced in large heads, good form, and of a very rich rosy-pink. A very beautiful variety, the best of its class. It was raised in the Royal Gardens at Frogmore, near Windsor.

P. PRINCESS ROYAL.—A neat dwarf-growing variety, blooming very freely. The leaves are of a deep green, with a most distinct black horse-shoe mark. The flowers are of a deep crimson-scarlet. Remarkably neat; a pretty variety, either for beds or pots.

P. LILAC UNIQUE.—All who see the *Purple Unique* admire its rich purple flowers, borne in such profusion. The Lilac Unique is a charming companion to it, of a pretty lilac, with a distinct dark spot on each of the upper petals. The flowers of similar size to the purple variety. Both are admirable for beds or pots, and bloom well during winter in-doors.

P. SCARLET DEFIANCE.—Foliage green; flowers good form, of a brilliant scarlet, with a white eye, produced in large heads, of a dwarf habit.

P. SIR JOSEPH HUME.—The foliage green, and the flowers of good form, a rich scarlet, with white eye. Very pretty and showy.

PLEIONE HUMILIS. THE HUMBLE. (Synonym: Epidendrum humile, Cælogyne humilis, Cymbidium humile.)—Dr. Buchanan Hamilton discovered this little gem in Upper Nepal, among moss, on the trunk of trees. Mr. Lobb has sent it to Messrs. Veitch from the Khasijah Hills. It is an Alpine herbaceous plant. The flowers appear before the leaves. Each blossom is three inches across. Petals and sepals narrowish, but the lip is broad. The former are of a pale lilac colour, and .the latter white, having at the sides a broad margin of yellow, dotted numerously with red spots, and the end of the lip too. Each flower-stem rises about two inches high. (Figured in *Paxton's Flower Garden.*)

PYXIDANTHERA BARBULATA. THE BEARDED. (Synonyme: Diapensia barbulata, D. cuneifolia.)—A small tufted, procumbent, creeping, and wide-spreading shrub. It grows in the warm "pine barrens" of New Jersey. Sir W. J. Hooker states, "Early in the month of May I was gratified, on the arrival of the Royal mail-steamer from

New York, with tufts of this charming little plant sent me by Mr. Evans, of Radnor, Delaware, gathered in New Jersey, and they were as fresh and as full of perfect flowers as if that day removed from their native soil." The leaves are *heath-like*, about half an inch long. The flowers are one-petalled, having five divisions, white; each blossom nearly half an inch across, and produced so numerously as to form a carpet of flowers. The blossoms are red before expanding. Plants have been received at the Royal Gardens of Kew; but they did not survive long. It is a very handsome, low, prostrate plant, and would be valuable for a rock-work, on which a suitable situation, either open or shaded, might be appropriated for it. (Figured in *Bot. Mag.*, 4592.)

The following handsome Flowers are in bloom in the Royal Gardens of Kew:—

Pelargonium Diadematum: Spinii.—It is one of the *fancy class*, which produces a very striking contrast with the richer coloured flowers. Its blossoms are of a bright *rosy-pink*, and the bed of it has a charming appearance.

P. Pink Nosegay.—Foliage green, with dark horse-shoe marking. The flowers are produced in large heads, of a very pretty *salmon-pink*. It makes a pretty contrast with the scarlets.

P. Cerise Unique.—Foliage green, dwarf habit. Flowers of a *bright cherry* colour. A very pretty variety, either in pots or beds.

P. Le Titien.—Green, with dark horse-shoe marking. The heads of flowers are large, and the blossoms a *lively carmine.*

P. King Rufus.—Allied to the Fancy class; dwarf grower and profuse bloomer; very good bedding variety. The flowers are large, of a rich *ruby-scarlet;* very showy.

P. Ivy-leaved.—Beds, compactly filled, of the white and purple flowered varieties, have a pretty effect. Their deep-green leaves, covering the soil with a green carpet, adorned over head with the pretty flowers, are very interesting.

P. Diadematum-rubescens.—Of the Fancy Class of bedding varieties.—Plant dwarfish; profuse bloomer; flowers large, of a pretty rosy-pink.

Verbena Seymourii.—There are some beds of this neat variety which have a very pretty appearance. It is an hybrid, of the very cut-leaved section, such as Sulphurea, Pulchella, &c., which are very dwarf. The flowers are borne in profusion; heads of medium size, flowers medium size too. In their early stage are of a bright pink, but become white at a later period, and the heads appear pink, margined with white. The flowers have an Heliotrope fragrance. It is a very desirable variety for a small bed, or for an edging.

Petunia. Shrubland Rose.—This is a most beautiful variety; grown there in beds it produces a nice effect. The flowers are of a clear bright rose, with a white eye.

P. DEVONIENSIS, or *Beauté Supreme.*—Flowers large, of a rich purple-crimson. The plant is a compact grower, blooms profusely, and, being large, is exceedingly showy. Beds of it have a very showy appearance.

LOBELIA ERINUS-MAXIMA.—This is one of the prostrate section, a compact grower, and a most profuse bloomer. The flowers are of a rich deep blue, with a white eye; and a bed of it, compactly filled, has a *very striking* appearance.

L. COMPACTA.—This is of the upright-growing section, dwarf, and of bushy habit. The flowers are of a beautiful light blue. A very desirable plant.

FANCY PELARGONIUMS.—Small beds of Queen Victoria and Lady Flora Hastings have a pretty effect. White grounds, the former coloured with rosy-purple, and the latter with lilac-purple upper petals.

PENTSTEMON, New Species, from the Texas.—This very handsome species is in bloom in the open bed in the Royal Gardens, Kew. It has the habit of what are now denominated the CHELONE section. The floral spikes are about a yard high, two feet of which is adorned liberally with its pretty flowers. Each blossom has a rather wide tube, three-quarters of an inch long. The end (properly *limb*) is three-quarters of an inch across, slightly five-parted. The outside of the flower is scarlet, and the inner part a deep rose colour. It is a very strikingly distinct and beautiful species.

PENTSTEMON, New Species from California.—Also in the open bed in the Royal Gardens of Kew. The flower-stems are about two feet high. The blossoms are rose-coloured in their early stage, but become a fine blue afterwards. Each blossom (tubular) is two inches long. It is a very handsome addition to this fine flowering tribe of plants. Both the above ought to have a place in every flower-garden.

PENTSTEMON GIGANTEA ELEGANS.—A large circular bed of this very rich crimson flowering variety was margined with a broad belt of the blue Salvia patens. It produced a very singularly showy effect, the contrast being striking.

P. SALTERII.—White, edged with bright pink, very pretty.

ABELIA FLORIBUNDA (Vessalia floribunda).—In the greenhouse, a plant about three feet high, is in profuse bloom. Its lovely rose-coloured trumpet-shaped flowers, each two inches long, and borne in clusters, renders it deserving a place in every greenhouse. It can be obtained cheap. It does well trained to a wire frame-work.

POTENTILLA ANTWERPENSIS.—It is a dwarf grower. The flowers are semi-double, and an orange colour. Being somewhat double, the blossoms do not, like the single ones, close in the evening.

P. GRANDIS.—The flowers are as large as a half-crown, firm petals, fine circular shape, and of a rich deep yellow colour. The plant grows two feet high, and is a very free bloomer. A charming variety; contrasts beautifully with the scarlet crimson, &c.

SALVIA AMABILE.—A handsome plant; the flowers in bud have the appearance of spikes of lavender, but when expanded the blossoms are a fine sky-blue, with a white eye.

TREE CARNATIONS.—We well remember in our early days being gratified by obtaining a plant of the crimson-flowered Tree Carnation. This kind was then common in the greenhouses in Yorkshire. Now, however, we have in this country twenty other kinds, all of which are very handsome, and highly merit cultivation. The following are offered to the public at a moderate price:—Attila, scarlet flake. Cassandra, rose. Gertrude, lavender, mottled with white. Incomparable, deep rose, striped with crimson. Jupiter, crimson. La Sermi, blush-white, mottled with rose. Vestatie, scarlet. Le Zephir, purple. Madonna, mottled rose and crimson. Nonpareil, blush-white. Proserpine, large crimson. The Baron, white, mottled with rose on the edge. Titus, dark crimson. Tom Pouce, blush, striped with rose. Union, white, striped with crimson.

This charming class of Carnations bloom in-doors both summer and winter, and are beautiful ornaments.

SELF-COLOURED AND CLOVE-SCENTED CARNATIONS.—Abbess of St. Clair, blush. Fireball, scarlet. Negro, dark purple. Parsee Bride, deep yellow. Purity, white. Queen of Denmark, rich red. Magnificans, rich crimson.

HELIOTROPIUMS.—H. Bertha Frapo: the flowers are of a darker colour than Voltairianum. Corymbosum: the plant grows from nine inches to a foot high, and forms a compact bush; the flowers are white, tinged with sulphur; they are produced in large corymbous heads, and have a most lovely appearance; they are powerfully fragrant. It ought to be grown in every greenhouse, room window, and flower-bed. All who see it fall in love with it. Bernedianum, flowers a dark blue, shaded with violet. Lilacina, lilac and blush, distinct and pretty.

THE PROGRESS OF THE PELARGONIUM.

(*Continued from page* 149.)

BY ORION.

IN the last article an error was made in stating that there were *only three* nurserymen about the year 1838 who were celebrated for the culture of Pelargoniums. It appears Messrs. Colley and Hill, of Hammersmith (a firm long defunct), contributed collections to the exhibitions, and obtained several prizes. There were also other growers; but the chief part of the trade was centered in the parties named.

The year 1839 was not productive of much improvement, though several decided novelties first appeared, among which were OLIVER TWIST, a small orange-scarlet flower, sent out at one guinea; the still much admired JEHU, at one guinea, now ranking with those termed

Fancy Flowers; and the once celebrated Jewess, raised by Mr. Foster, and sent out at three guineas. This was considered a splendid acquisition, and the demand was greater than the supply of plants; every body wanted it, and a good sum of money must have been realized. Mr. Foster also raised his Discount, sent out at one guinea; Glow-worm, Prima Donna, Splendidum, Sunbeam, Vesta, and Vivid, all advertised at two guineas each, but none of them worthy of any remark now, except that Vivid was the parent of many bright flowers, to be alluded to hereafter. Mr. Garth's principal flower this year was Joan of Arc, priced at four guineas each. This was a fine flower, and long continued popular, from its being a good market variety, with stiff petals and stout habit. His other flowers were Fanny Garth, two guineas; Magna Charta, three guineas; Una, three guineas, a nice clear light flower, and one which also became an excellent selling variety; Perfection, sent out at one guinea. To the above may be appended Beatrice, three guineas, a good dark crimson; Gauntlet (Gaines'), three guineas; Lady Carlisle, one guinea, a high coloured variety; Lady E. Boulteel, two guineas, a good stage variety; and Madonna, at one guinea. It would be superfluous at the present time to describe every individual flower; therefore, giving the names only of the *principal*, but short-lived, novelties, the descriptions will be confined to those which made the most stir in their time.

The year 1840 saw some flowers the first time, which, indeed, caused a sensation. Mention Conservative, Coronation, Erectum, Grand Duke, Victory, and Sylph to any old enthusiastic cultivator, and he will say, "Ah! those flowers tempted me to lay out my money lavishly indeed;" and it is not surprising, for they were valuable gems in their day. Perhaps no single year saw such a step in advance before or since; and the fame they and their raisers acquired stimulated others in every part of England to enter the lists, and in 1842 we shall find that raisers of flowers and exhibitors became much more numerous, and a greater struggle for pre-eminence ensued. The "flower of the year" was undoubtedly Conservative, raised by Mr. Garth, and priced at five guineas; it was of a peculiar and (then novel) rich purple tint, and became the precursor of many other celebrated purple flowers, as Sir Robert Peel, Mercury, &c. The chief fault it had, for all flowers have their faults, was an unconquerable propensity to curl the petals backwards; otherwise for the period it ranked as a first-rate variety. The same celebrated grower's Coronation, sent out at three guineas, was a valuable addition; it was about the colour of the Flying Dutchman of our day, but with a fine habit, producing generally from ten to twelve fine flowers on one truss, a quality few of the present popular varieties possess. Bijou, Clarissa, Corinne, Rienzi, Rosea-elegans, and Victory, all raised by Mr. Garth, and all advertised at two guineas each, were considered "stars" in their day, but do not call for any particular distinction, except that the last proved to be one of the useful selling varieties, possessing a good habit, with stiff well thrown-up flowers. It may be mentioned *en passant*, that Conservative was the cause of more money being turned over than any other variety raised before or since. The writer remembers one gentleman who would hardly tolerate any other in his garden, so attached was he to it, whether for the flower or the name it bore is not quite certain; but at any rate he did not mind paying five shillings each for two dozen plants, and to this day he still keeps some in his possession. Mr. Foster's flowers this year were ERECTUM, three guineas, a fine orange-tinted variety, very much exhibited afterwards; BRIDEGROOM, three guineas, a well-contrasted variety, having light lower and dark upper petals, but the *heavy blotch* of the present day was wanting; FIREFLY, FLORENCE, LADY DOURO, and JESSICA, each sent out at two guineas, are entirely forgotten now. Not so are the same raiser's celebrated SYLPH and MATILDA, each of which were priced at three guineas, and noble flowers they were, of a beautiful rosy-flesh ground, with a small but distinct spot on the upper petals, and both of such fine habit and freedom of bloom as still to be retained in some collections to the present time; indeed, nothing in the same way has since appeared to take their place. The same remark also applies to Bassett's PRIORY QUEEN, sent out at two guineas, still grown by some, there being no other similar variety, its colour a light lively pink. Gaines's GRAND DUKE, sent out at five guineas, was in much favour; it was a heavy crimson flower, but of bad form. ANNETTE, a good white, also appeared at one guinea, Gaines's EMPEROR at two guineas, and the same raiser's MASTERPIECE at three guineas. One other variety must be mentioned, as it was a bright addition—Catleugh's ORANGE-BOVEN, sent out at one guinea; this was the nearest approach at that time to what are now termed "scarlet flowers," and could have only been tolerated, as many are now-a-days, for the *intensity of colour*, as it was very faulty in every other respect.

SUMMER PRUNING THE ROSE.

BY A COUNTRY CURATE.

LAST summer I read in your Magazine the recommendation of Rosa to allow some shoots of last year's production to remain unpruned till spring; and after such had pushed new shoots, two or three inches long, then to cut away the entire portion of the shoot of last year's producing, down so as only to leave it two (or three at most) buds upon it. Thus by cutting-in, a fresh production of new shoots is induced, and they furnish a display of Roses after the early ones are over, and the blooming season of such Roses is prolonged. This spring I adopted the method, and find it to realize what was stated. This improvement in Rose culture, however, suggested to my mind the propriety of cutting-in, upon all my early blooming Roses, some of the most vigorous shoots of the present (1851) year's producing, and which had had flowers upon them, or otherwise, and they would most likely push new shoots, which would produce bloom at a later period this summer and autumn. I, therefore, looked over my Roses, and two or three of the strongest on each bush was cut-in, such as had bloomed an inch or two below the flowers, and those not having had flowers about one-third was cut away. This was done the middle of May, and now, nine weeks after, I have a beautiful show of flowers on the secondary shoots induced by cutting-in, as stated. About the middle of June I cut back some other shoots which are pushing freely; and now (July 15th) I have shortened others. I feel assured that these later-produced shoots will furnish a display of flowers also, the first shortened ones doing so in so brief a period. By this simple process flowers may be had from the middle of May to November upon the same Rose.

This will be of advantage to persons not having much room to grow many varieties in, as well as to have an extensive blooming season of early summer favourites. There are a number of most beautiful early-blooming climbing Roses, as the Garland, Reine de France, &c., that by this simple process can be had in bloom from April to the end of summer.

The more the Roses bloom, the increase of rich food must be proportionately supplied by manure, manure water, &c.

A SIMPLE METHOD OF DRYING AND PRESERVING SPECIMENS OF FLOWERS, &c.

BY MR. H. STILWELL, OF PINE APPLE-PLACE NURSERY, LONDON.

THE apparatus required is several quires of good red blotting-paper, divided into parcels of three or four sheets each, and cut across the middle so as to make them oblong. Cut several sheets up the back into half-sheets, and let there be twice as many half-sheets as parcels. Five or six boards, a little larger than the paper, planed smooth on each side; common deal will do, but beech is better. The next thing is the press; but the following will answer the same purpose. Get several weights, say ten to twenty pounds each, and some knitting-needles.

The mode of procedure is as follows:—Upon one of the pieces of board lay a *parcel* of paper, and half a sheet over it; and on this put the floral specimen you wish to dry. Cut off all superfluous leaves or branches; and if it has a *thick** woody stem, cut off a slice from the under side; then carefully spread the leaves and flowers in as natural a position as can be, keeping any parts that would curl upwards in their proper places by laying the needles across them. This being done, place another half-sheet over the specimens, and upon it a *parcel* of the paper; hold it down with the hand, and draw out the needles at the side. If you have many *specimens*, extend the same mode of operation, always laying the specimens between two half-sheets; the reason for which is, that the *sheets* may be removed altogether without being separated, in order that the *parcels* may be dried by the fire. Thus proceed till you have all the specimens duly placed; then put a *board* on the top, as at the beginning, and finally lay the weights upon the top board. After a day or two take off the weights, and carefully remove the half-sheets without separating them; for if they are separated, the flowers are very apt to curl inwards, if not dry. Dry the parcels by fire, and replace the specimens. Repeat this process in a day or two, and thus continue the method.

Of course the more succulent the specimens are, the longer period will be required to complete their drying process; but when specimens have been in the press for a week or ten days, they may be taken out and arranged in the herbarium. The subject will be continued next month.

THE SPOTTING ON PELARGONIUM LEAVES.

BY MR. THOMAS GRAY, FLOWER GARDENER, BROOKE HOUSE, LIVERPOOL.

VERY numerous have been the complaints by Pelargonium growers about the injurious effects of the spot on the leaves, &c. of Pelargoniums. I have a large collection of the best kinds, both in fancies and the other classes. I never had a single plant affected with this pest previous to the present season; but procuring some of the newest kinds early in spring, I discovered that as soon as the leaves began to unfold they were frightfully affected by the spot. I directly separated the newly-procured plants from my previous collection, and placed them in a dry pit frame, where they stood elevated upon a wood lattice framework, so that the water dripping from the pots readily drained away, and the bottom of the pit being concrete, and slightly sloping, the extra water ran into the channel along the front, and entered the drain at the lowest corner. The first step was to dip the heads of the plants in water; and having done so, whilst wet I dusted them well all over the leaves, as well as the under sides and the branches. This being done, I had the glass lights placed over them, but so fixed that they were raised a foot above the usual framework, in order not only to cover the plants, so that rain might not wash the sulphur away, but the space at the front and back allowed a free current of air to pass. The sulphur was permitted to remain for a fortnight. I then had the plants again dipped over head; and moving them in the water for a time, all the sulphur was removed, and I discovered that the spotting was arrested; and now the plants have a perfectly healthy appearance, and not a spot is to be seen.

BANKSIAN ROSES.

BY ALPHA.

IN some early volume of your Magazine I recollect some judicious remarks are made relative to the particular treatment which this class of Roses require, it being very different from that which other Roses need. As many of the present subscribers may not have read those particulars, I beg to state that the Banksian Rose does not produce its flowers on the wood of the *present year's* growth as other Roses do, but on the wood of the *previous year*.

In consequence of this particular, the great object must be to obtain strong *well-ripened* wood of this season to supply the bloom of next year. The principal attention to effect this is to treat the Rose very similar to what is practised with the Peach-tree, as it regards its summer regulation of new shoots by thinning away the superfluous shoots, retaining only those which have bloom upon them, and a due proportion being left for the following year's bloom. Towards the end of April hand-dress the Rose-tree, when the shoots will be about four inches long. Again, in July or early part of August look over the Rose, and stop the leads by cutting away about one-third of each; and, not to have the plant crowded, cut some clean away, or so as only to leave about three inches to form spurs of bloom. The wood now left, being kept nicely open, will have a proper chance of ripening by the end of summer. The shoots will require to be duly secured to the wall or trellis. If this attention to its pruning in summer be duly observed, it requires no other pruning during winter, and a constant and profuse bloom may be secured every year. I have adopted the plan for several years with the greatest success, the white and yellow blooming most profusely.

BRIEF REMARKS.

Royal South London Floricultural Society's Exhibition, Surrey Gardens, held June 25.—The following are the particulars of the awards for Pinks:—

Amateurs Class.—Twelve best varieties. First Prize, Mr. Baker, of Woolwich, for Sappho, Whipper-in, Lola Montes, Narborough Buck, Double X, Harriet, Alpha, Hark-forward, Criterion, Countess Rossi, and Mrs. Herbert. 2nd, to Mr. Halladay, of Woolwich, for Alfred Morrison, Lady Mildmay, Double X, Lola Montes, Lord John Russell, Hardstone's William, Agitator, Harriet, Jane Sarah, Brilliant, Winchester Rival, and Oxonian. 3rd, to Mr. Edwards, of Wace Cottage, Holloway, for King of Purples, Lady Mildmay, Double X, Winchester Rival, Laura, Harriet, Oxonian, Prince Albert, Rosalind, Alfred Morrison, Mrs. Herbert, and Jenny Lind. Other exhibitors in this class were Messrs. Ellis, Hardstone, Venables, and Willmer.—*Nurserymen:* Twenty-four varieties. First Prize to Mr. Norman, of Woolwich, for King of Purples, Rosea elegans, Narborough Buck, Willmer's Surplice, Lady Mildmay, Whipper-in, Goliah, Lola Montes, Rubens, Double X, Surpriser, Harriet, Brilliant, Diana, Criterion, A. Morrison, Laura, Morning Star, Alpha, Kate, Pickwick, Countess Rossi, Jenny Lind, and Melona. 2nd, Mr. Ward for Narborough Buck, Lady Mildmay, Smith's Goliah, Harriet, Hillier's Goliah, William, Winchester Rival, Brilliant, Bell's Henry, Laura, Melona, Morning Star, Lord W. Russell, Prince Albert, Jenny Lind, Lord J. Russell, Willmer's Elizabeth, Duchess of Kent, A. Morrison, Creed's President, Alpha, and Countess Rossi. 3rd, Mr. Bragg, of Slough, in whose stand we remarked, in addition to the flowers mentioned above, John Bull, Gay Lad, Sir Robert Peel, Benjamin, Nonpareil, Edward, British Queen, and Mrs. Hooper.

The Great Northern Tulip Show.—The exhibition was held in the County Hall, Derby, on 27th May 1851. The following is the statement of the awards:—

For the best Six Rectified Tulips, one of each Class.—1. Mr. Adams, Derby: Earl Douglas, Pilot, Washington, Princess Royal, Heroine, and Geraldine. 2. Mr. Houghton, Hempshill, near Nottingham: Royal Sovereign, Captain White, Britannia, Queen Charlotte, Heroine, and Triomphe Royale. 3. Mr. Charles Spencer, of Thulston: Charles X., Captain White, Unknown, Queen Charlotte, Heroine, and Camillus. 4. Messrs. Lakin and Son, Derby: Sovereign, Pilot, Eclipse, Princess Royal, Lady Middleton, and Aglaia. 5. Mr. Thorniley, of Heaton Norris: Charles X., Sanzio, Incomparable, Lysander Noir, Aglaia, and Rose Lac. 6. Mr. C. Turner, Slough: Polyphemus, Hamlet, Queen of the North, Primo Bien du Noir, Heroine, and Triomphe Royale. 7. Mr. Harpham, Nottingham: Polyphemus, Captain White, seedling feathered byblœmen, Violet Brun, Comte de Vergennes, and Aglaia.

Single Specimens, in Classes. — Feathered Bizarres: 1. Royal Sovereign, Mr. James Parkins. 2. Polyphemus, Mr. Adams. 3. Catafalque, Mr. G. W. Hardy. 4. Magnum Bonum, Messrs. Lakin and Son. 5. Duc de Savoy, Mr. Spencer. 6. Duke of Devonshire, Mr. Orson. 7. Trafalgar, Mr. Hudson. 8. Ulysses, Mr. Edwards. 9. Sir Sidney Smith, Mr. G. W. Hardy. 10. Pompe Funebre, Mr. Thorniley. 11. Sir Sidney Smith, Mr. G. W. Hardy. 12. Pompe Funebre, Mr. Thorniley.

Flamed Bizarres: 1. Captain White, Mr. John Ward. 2. Pilot, Mr. Adams. 3. Polyphemus, Mr. Houghton. 4. Lord Milton, Mr. Hudson. 5. Strong's King, Mr. Harpham. 6. Grandeur Magnifique, Mr. Parkinson. 7. Marshal Soult, Mr. Turner. 8. Albion, Mr. Edwards. 9. Optimus, Mr. Turner. 10. Emperor of Austria, Mr. Houghton. 11. Sir Thomas, Mr. Marsden. 12. Duke of Clarence, Mr. Battersby.

Feathered Byblœmens: 1. Gibbons's Seedling, Mr. Battersby. 2. Ditto, Mr. Thorniley 3. Black Baguet, Mr. Houghton. 4. Kosciusko, Mr. G. W. Hardy. 5. Lady Stanley, Mr. Heap. 6. Chellaston Seedling, Mr. Parkinson. 7. Lord Gough, Mr. Nunnerley. 8. Lord Denman, Mr. Astle. 9. Seedling, Mr. Hudson. 10. Byzantium, Mr. Edwards. 11. Sancta Sophia, Mr. Harpham. 12. Lancashire Hero, Mr. Prescott.

Flamed Byblœmens: 1. Queen Charlotte, Mr. Houghton. 2. Princess Royal, Mr. Allestree. 3. Primo Bien du Noir, Mr. Edwards. 4. Lord Denman, Mr. Spencer. 5. Surpass le Grand, Mr. Parkinson. 6. Madonna, Mr. G. W. Hardy. 7. Grand Turk, Mr. Hudson. 8. Surpass le Grand, Mr. Parkinson. 9. Incomparable Grand, Lakin and Son. 10. La Bien Amie, Mr. Godfrey. 11. Duchess of Sutherland, Mr. Page. 12. Atlas, Mr. Prescot.

Feathered Roses: 1. Aglaia, Mr. Haines. 2. Heroine, Mr. G. W. Hardy. 3. Light Baguet, Mr. Lymbery. 4. Comte de Vergennes, Mr. Harpham. 5. Hero of the Nile, Mr. Hudson. 6. Lady Middleton, Mr. Wasnidge. 7. Napoleon, Rev. S. Creswell. 8. Agnes (seedling), Rev. S. Creswell. 9. Princess Sophia (Goldham), Mr. Thorniley. 10. Anastasia, Mr. Adams. 11. Heroine, Mr. Houghton. 12. Lady Crewe, Mr. Marsden.

Flamed Roses: 1. Triomphe Royale, Mr. G. Small. 2. Aglaia, Mr. T. Allestree. 3. Camilla, Rev. S. Creswell. 4. Lady Jane Grey, Mr. Adams. 5. Seedling (Camilla), Mr. J. Battersby. 6. Catalina, Mr. Turner. 7. Lady Lilford, Mr. Nunnerley. 8. Fanny Cerito, Mr. Parkinson. 9. Seedling (Isis), Mr. J. Battersby. 10. Louis Quarto, Mr. Parkins. 11. Vesta, Mr. Nunnerley. 12. La Vandikken, Mr. Lymbery.

For the best Three Breeder Tulips, one of each Class.—1. Mr. Marsden, Derby: Pilot, Catherine, and Princess Royal. 2. Mr. Adams, Derby: Polyphemus, Lady Stanley, and Van Amburgh. 3. Mr. James Parkins, Derby: Pilot, Amelia, and Orleans. 4. Mr. Astle, Melbourne: Pilot, Lady Stanley, and Lord Denman. 5. Mr. Heap, Sandbach: Marcus Manlius, Zillah, and Godet Parfait.

Single Specimens, in Classes.—Bizarre Breeders: 1. Pilot, Mr. Adams. 2. Gibbons's No. 2, Mr. W. H. Hardy. 3. Polyphemus, Mr. G. W. Hardy. 4. Sobraon, Mr. Battersby. 5. Hamilton, Mr. Astle. 6. Merit, Mr. James Parkins. 7. Cossack, Mr. Battersby. 8. Seedling, Mr. Battersby. 9. Janus, Mr. Nunnerley, jun.

Byblœmen Breeders: 1. Venus. Mr. James Parkins. 2. Van Amburgh, Mr. Marsden. 3. Unknown, Mr. Adams. 4. Gibbons's 45, Mr. G. W. Hardy. 5. Annot Lyle, Mr. Marsden. 6. Miss Forrest, Mr. Nunnerley, jun. 7. Princess Royal, Messrs. Lakin and Son. 8. Violet le Grande, Mr. Marsden. 9. Lord Denman, Messrs. Lakin and Son.

Rose Breeders: 1. Lady Stanley, Mr. Adams. 2. Lady Leicester, Mr. Astle. 3. Lady Stanley, Mr. Marsden. 4. Lady Jane Grey, Mr. Adams. 5. Breedon Gem, Mr. Battersby. 6. Lord Derby, Mr. Lymbery. 7. Princess Alice, Mr. G. W. Hardy. 8. Seedling, Mr. G. W. Hardy. 9. Fanny Cerito, Mr. Parkinson.

NATIONAL FLORICULTURAL SOCIETY, JUNE 26.—NEW SEEDLINGS. —*First Class Certificates* were given to the following:—

Pelargonium.—Optima, from E. Foster, Esq. Upper petals dark, edged with fiery crimson; lower petals deep rose, with a crimson blotch on each. Excellent form.—*Optima, Pink*, from Mr. Turner. Flower large, good round petal, smooth edge, and pure white. Well up, and fine form.

Certificate of Excellence.—Pelargonium Ariadne, from E. Foster, Esq. Upper petals dark, edged with rose; lower petals pale rose, and centre of flower white.—*Enchantress*, from E. Foster, Esq. Upper petals dark, edged with rosy-pink; lower petals light, streaked with pink. Flower pure white centre.—*Rubens*, very much like *Optima* in colours and form, but the blotches on the lower petals are more distinct, and renders it more beautiful.

Fancy Pelargoniums.—Richard Cobden, from Mr. Ambrose. It is very like Statuiski in form and habit, but a lighter flower, and will always be admired. It received a Recommendation.—*Lady Emma*, from Mr. Lockner. White and rosy-lilac, large, and produced in profusion. Very pretty. Received a Recommendation.

Pansies.—Kossuth, from Mr. Rogers, of Uttoxeter. Eye yellow, surrounded with blue rays, and its ground colour of the richest black.

A Certificate of excellence was awarded.—*Swandown*, from Mr. Turner. It has been previously noticed. A Certificate was awarded. —*Pandora*, Mr. Hunt's. An excellent variety.—Hunt's *Rotunda* and Turner's *Black Diamond* are defective in size.

Verbena.—*Orlando*, from Mr. Smith. A blue lilac, flowers of medium size. A Certificate awarded.

Pelargonium.—*Attraction*, from Mr. Turner. A bright-coloured variety; likely to be useful as a showy kind for the market.

Gloxinia alba grandiflora, from Mr. E. G. Henderson, also *G. grandis*, very fine; and *Escholzea alba*, a white variety.

MEETING HELD ON JULY 10.—On this occasion there was a large attendance, and the following flowers had awards:—

Picotees.—*Cassandra*, petals of good substance, but scolloped, which disfigures it so as to be worthless.—*Diadem*, a large flower, heavy edged; but its bars and spots are striking blemishes.

Pink.—*Titus*, from Mr. Edwards. A large flower, very showy.

Gladiolus Rosamondii, from Mr. Staines. A brilliant scarlet, with white ribs. Very pretty.

Fuchsias.—*Diamond.* The sepals reflex very much, and fully exhibit the large corolla. A pretty addition.—*L'Elegant.* Tube and sepals white, with deep pink corolla. Not equal to some others out.

Verbena.—*National.* Flowers a dull red, but a good trusser.

Purple Rival was recommended.

There were a number of other plants and flowers exhibited; but they were not equal to many others previously sold out.

STAINES HORTICULTURAL SOCIETY.—The recent exhibition of plants, &c., was a considerable advance upon previous ones, and highly creditable to all concerned. The best-grown Balsams we have seen for some years were exhibited; the plants were robust, in fine bloom, about as broad as high, and the varieties excellent. The second-best grown six were all alike as to variety; and it being stated in the schedule *six varieties*, plants of less merit as to management obtained the prize. Pelargoniums, Roses, collections of Greenhouse and Stove Plants, as well as Florists' Flowers, were of excellent character.

PICOTEE SEEDS.—Having in the year 1847 saved more Picotee seed than I could conveniently sow the succeeding season, I tried the following experiments, with the view of ascertaining if I could preserve its vitality for some years:—I dried some river-sand in an oven; when cold, I mixed some of it with the seed, and filled a small phial with the mixture, corking it down tight, wrapped it in paper, and placed it in a drawer. This season I entrusted it to a friend to sow, and I understand that he has obtained a crop of fine healthy plants. I took the hint from having learned, some time back, that earth raised many feet from the surface, on being exposed to the action of the atmosphere, had produced several plants of new varieties; it therefore struck me that, if I could exclude the air, light, and moisture from the seed, it might probably retain its vitality, and I think the experiment has verified the correctness of my idea.—*C. N. R.* (*Gardeners' Chronicle.*)

ROSES.—The following Roses were budded and grafted on the

Manettii stock, in the summer of 1850 and spring of 1851:—Standard of Marengo, twenty plants, budded from 15th June 1851, from a plant that flowered in the greenhouse. Not a bud has failed. and the plants are now (16th July) two feet six inches in height, and covered with bloom. Princess Clementine, buds and grafts, three feet high; Moss Lanei, ditto, three feet; ditto, Comtesse de Murinais, four feet; ditto, Unique de Provence, two feet; ditto, White Bath, three feet; ditto, Crested, three feet to four feet; Géant des Batailles, buds and grafts, eighteen inches, and densely covered with bloom; Harrisonii and Persian Yellow Briar, from three to four feet; Bourbon Dupetit Thouars, four feet; Louis Bonaparte, buds and grafts, three feet; Julie Krudner, a dwarfish grower at all times; not a plant failed: it was grafted April, 1851, and is now eighteen inches high, and covered with bloom, together with many other kinds.—*Dillistone and Co., Sturmer Nurseries, Halstead.*

Artificial Flowers.—"Lucy" may readily obtain instructions in the art of wax-flower making, for now there are many teachers; but the making of the talc flowers, as shown at the Great Exhibition, is, we are told, a secret. Artificial flower making is by no means so modern an art as you seem to consider, for in the Talmud, or Gemara, is this legend:—"As Solomon sat surrounded by his court, at the foot of the throne stood the inquisitive Queen Sheba; in each hand she had a wreath of flowers, the one composed of natural, the other of *artificial* flowers. Art, in the labour of the mimic wreath, had exquisitely emulated the lively hues and the variegated beauties of nature, so that, at the distance it was held by the queen for the inspection of the king, it was deemed impossible for him to decide, as her question imported, which leaf was the *natural*, and which the *artificial*. The sagacious Solomon seemed *quite posed*. Yet to be vanquished, though in a trifle, by a trifling woman, much irritated his pride: the son of David—he who had written treatises on the vegetable productions, 'from the cedar to the hyssop'—to acknowledge himself outwitted by a *woman*, with shreds of *paper* and *glazed paintings!* The honour of the monarch's reputation for divine sagacity seemed diminished; and the whole Jewish court looked solemn and melancholy. At length an expedient presented itself to the king, and, it must be confessed, worthy of the great natural philosopher. Observing a cluster of bees hovering about a window, he commanded that it should be opened; it was immediately opened, the bees rushed into the court, and immediately alighted on one of the wreaths, while not a single one fixed on the other. The decision was not then difficult; the learned rabbins shook their beards in rapture, and the baffled Sheba had one more reason to be astonished at the wisdom of Solomon." This would make a pretty poetical tale. It would yield an elegant description and a pleasing moral—that the bee only rests on the natural beauties, and never fixes on the painted flowers, however inimitably the colours may be laid on.—*D'Israeli's Curiosities of Literature.*

Love of Flowers.—The love of flowers seems a naturally implanted passion, without any alloy or debasing object as a motive. The cottage has its Pink, its Rose, its Polyanthus; the villa, its Geranium, its

Dahlia, and its Clematis. We cherish them in youth, we admire them in declining days; but perhaps it is the early flowers of spring that always bring with them the greatest degree of pleasure; and our affections seem immediately to expand at the sight of the first opening blossom under the sunny wall or sheltered bank, however humble its race may be. In the long and sombre months of winter, our love of nature, like the buds of vegetation, seems closed and torpid; but, like them, it unfolds and reanimates with the opening year, and we welcome our long-lost associates with a cordiality that no other season can excite, as friends in a foreign clime. The Violet of autumn is greeted with none of the love with which we hail the Violet of spring; it is unseasonable; perhaps it brings with it rather a thought of melancholy than of joy; we view it with curiosity, not affection; and thus the late is not like the early Rose. It is not intrinsic beauty or splendour that so charms us, for the fair maids of spring cannot compete with the grander matrons of the advanced year; they would be unheeded, perhaps lost, in the rosy bowers of summer and of autumn; no, it is our first meeting with a long-lost friend, the reviving glow of a natural affection, that so warms us at this season. To maturity they give pleasure, as a harbinger of the renewal of life, a signal of awakening nature, or of a higher promise. To youth, they are expanding beings, opening years, hilarity and joy. There is not a prettier emblem of spring than an infant sporting in the sunny field, with its osier basket wreathed with Butter-cups, Orchises, and Daisies. With summer flowers we seem to live as with our neighbours, in harmony and good-will; but spring flowers we cherish as private friendships. — *Journal of a Naturalist.*

New Trees.—It may be interesting to the lovers of fine evergreen trees to hear that his Royal Highness Prince Albert planted the largest saleable plant in England, of the Chilian Arbor-vitæ (Libocedrus Chilensis), in the gardens here, to commemorate his first visit to Shrubland Park; that this noble evergreen tree attains the height of from 60 to 100 feet on the Andes of Chili; and that, although it has been known to botanists for some time, from the accounts of travellers and dried specimens, and also with Libocedrus tetragona, as the celebrated Alerce of Chili, so much valued for the excellence of its timber, it was only last season that the first seeds of it were procured in quantity by Mr. Low, nurseryman, at Clapton, near London—the only importer of it—and that through the exertions of a once Suffolk gardener, Mr. Thomas Bridges, to whose memory Sir W. Hooker dedicated the genus Bridgesia. It thus turns out, singularly enough, that the first plant from these seeds should be planted in Mr. Bridges' native county; and that, too, by the most distinguished patron of science in this or in any other country. Mr. Bridges advises that this splendid tree should be planted over a dry bottom, and I can vouch for that condition having been fulfilled here to the letter. He also advises that very young plants of it should be slightly protected for the first winter or two, and, of course, we shall attend to his instructions. But Dr. Lindley and Sir W. Hooker agree in considering it as hardy as the

Araucaria imbricata from the same country. Dr. Lindley, writing on this and the other Chilian Spruce, Libocedrus tetragona, says of them, "No doubt they are among the finest Conifers in the world."

After planting the Chilian Libocedar under the royal standard, which waved over our heads from the summit of the Albert Tower, a recent pile erected from the designs of Mr. Barry, his Royal Highness opened a conversation on the recent divisions into which the Conifers have been arranged by Endlicher and other botanists, and evinced such a thorough knowledge of the different sections as surprised even an old gardener, to say nothing of the workman-like manner in which he handled the silver-mounted spade in the act of planting this fine tree, a biography of which had been prepared for his perusal. It turned out that his Royal Highness had little need of such aid respecting any of the recently-introduced trees to this country. A gentleman present having expressed a wish that his Royal Highness might live to see the tree he had planted rear its head as high as the top of the flag-staff close by, he immediately instanced, in reply, the rapid growth of several species of Cypresses, and, among the rest, an avenue of Cypress near the city of Mexico, where some of the trees have attained the enormous height of nearly 300 feet. Altogether his Royal Highness remarks, conversation, and questions about our craft have put some of us here to the blush; and I only wish that I could say or write in the same strain, so as to induce our rising race of gardeners to study, more than they usually do, the geography of the plants they cultivate, and also their botanical arrangement, according to the best authors. Depend upon it a young gardener has only put his foot on the first step of the ladder when he has received his gold medal for a collection of well-grown specimens.—*D. Beaton.* (*Cottage Gardener.*)

VICTORIA HOUSE FOR WATER PLANTS, in the Nursery of Messrs. Knight and Perry, King's-road, Chelsea.—This structure has been noticed in a former number; and on calling to see the plants of Victoria regia we were much delighted with the large handsome house, and more so with the plants growing and blooming so admirably in the large tank. It contained not only plants of the Victoria regia, but fine healthy specimens of the following:—

Nymphæ rubra.—The flowers are *eight inches* across, of a *rich crimson*, having a tinge of purple. The leaves, too, are very singularly dark coloured. It is exceedingly handsome, and very showy.

N. odorata.—The flowers are six inches across, white, with a large yellow centre of stamens, and delightfully fragrant.

N. maxima.—Flowers six inches across, white, with a centre of yellow stamens.

N. micrantha.—Flowers four inches across, white, with a centre of pale sulphur stamens.

N. dentata.—Flowers eight inches across, white, with a centre of yellow stamens.

N. pygmæa.—Flowers two inches across, white, with yellow centre. These were in perfect health, and blooming beautifully.

An excellent plant-grower recently visited Messrs. Knight and

Perry's; and he observes, in a communication sent to the *Gardeners' Chronicle:* On entering the Victoria-house, and seeing the plant in bloom,—

"I cannot help stating that I felt rather disappointed on first seeing the flower of the Victoria, after the marvellous display made by its foliage. Such a leaf seemed to promise much; and measuring the bloom by the proportion that Nymphea flowers bear to their leaves, one might have reasonably expected the Victoria to produce a flower as large as the top of a bushel basket; and if it had been rich in colour, in addition to this large size, it would have been still more desirable; however, with all its beauties and all its shortcomings, it is fair indeed; but its ephemeral life extends only to a day; the morrow dawns only upon its decline, its work is finished, and the foot-prints of decay are stealing over its loveliness. In colour, too, it suffers by comparison with aquatics of less pretensions, for I need only refer to one well-known genus, the Nymphæas—plants of the easiest culture, where there is room and warmth afforded them—to show that the tanks erected for the Victoria may be greatly enriched by a margin of Nymphæas. A square yard or two of space is all that they require; in fragrance they are not to be surpassed; in colour, some are of the purest white, others are of the fairest shades of blue, whilst one or two are crimson.

"On visiting the new Victoria-house at Messrs. Knight and Perry's the other day, I was handsomely rewarded, after the many long miles I had travelled to see the 'lions of London,' with a sight of by far the loveliest flower I had ever set my eyes upon. It grew in a corner of the tank, and might be twenty-five feet from where I stood; it was a Nymphæa, with a flower about as long as my hand, possessing the colour of Le Géant des Batailles Rose, and, like all other plants or flowers that grow upon the brink of still water, or that float upon its bosom, it was reflected in the 'liquid element,' and consequently counted double; therefore, if any one is at all disappointed, as I confess I was, in the flower of the Victoria regia, let him try a verge of Nymphæas, and he will not go unrewarded. I would also just hint to the London sight-seer, that a cab-hire of half-a-crown to Chelsea will not be thrown away in a visit to the nursery in question, where this beautiful plant is in bloom; and before I take leave of this subject, I would beg to remark that, as the Victoria Lily has raised the tanks to a dignified standing, as compared with what they were, the same dignity ought to be observed in the plants that are made to associate with this queenly flower.

"The Nympheas are worthy of a place in every large tank; and those who can add Nelumbiums, will find that these three genera, well grown, will form such a selection as cannot be excelled by any aquatics in cultivation.

"I was led to this remark by seeing in one place the gouty legs of Pontederia crassipes, and the light foliage of Limnocharis Humboldtii, floating under the heavy batteries of the Victoria, which seemed ready to swamp them with the next leaf that it unfurled."—*Alex. Forsyth, St. Mary's Church, June* 26.—[Three thousand five hundred pounds have been voted by Parliament, to be expended in the erection of An

AQUARIUM in the Royal Gardens, Kew, where we shall have water plants in perfection.—EDITOR.]

MESSRS. WEEKS AND CO.'S NURSERY, KING'S-ROAD.—We recently visited this nursery, and were informed that the Victoria regia, Royal Water Lily, has been fully exposed in the open pond, night and day, for the last three weeks. It is growing and flowering most satisfactorily, the total number of blossoms it has produced being sixteen. The leaves are four feet across, and perfectly healthy; but as yet they have exhibited little inclination to form rims; their whole surface prefers laying quite flat upon the water. A new leaf developes itself about every fourth day, and a flower every third day; the appearance of the plant would indicate a likelihood of its blooming for some considerable time yet to come. The water in the basin is kept at between 80° and 90°, and the boiler from which this heat is derived also warms five houses and two pits of moderate size. About two dozen gold fish were introduced into the pond some short time ago, and they have since multiplied so abundantly, that the water literally swarms with their young, which all present the fine colour of their parents. Indeed so well do they succeed and breed in the warm water, that Mr. Weeks is of opinion they will ultimately almost pay the cost of heating it. We need hardly mention that this experiment points out another purpose to which waste steam might be employed both profitably and for pleasure. It is the Thames water in which the plant is growing at Chelsea; and we understand that it is the intention at present to widen the pond next year, and plant in it the various other kinds of tender Water Lilies. It may be worth notice, that the overflowings of this tank are collected into a cistern, from which tepid water can at all times be had for the purpose of watering plants with.

ROCKETS.—During a trip in France this month I saw in a garden at Fontenay aux Roses seven different sorts of Rockets, all of them distinct in habit, and very beautiful, viz., White, giant, growing five to six feet high, with immense spikes of flowers. White, medium size, usually cultivated in England, height about two feet. White, dwarf, also usual here, not more than one foot. Purple, about two feet high, an abundant bloomer, very double and showy, the colour of a dark purple candy tuft. Crimson, two feet high, rich and attractive, but the spikes not so large as the purple. Rose or Peach, same as we have in our gardens, but grown finer, probably owing to the climate. Yellow, very double and more compact in form, eighteen inches: this last, I think, was not a Rocket, but a double-flowering Erysinum. I could have had slips of the above, as the owner was a market-gardener; but my route prevented, as it then lay into the south of France.—*S. P. Rushmere.*

ON THE MODE OF MAKING BASKETS FOR ORCHIDEOUS PLANTS, AND THE BEST WOOD FOR THAT PURPOSE.—Blocks or baskets are most suitable for true air-plants, such as Vandas, Saccolabiums, Aerides, Angræcums, Phalænopsis, &c.; when planted in baskets or on blocks they send out their roots much stronger into the air, and suck up the moisture; whereas, if their roots are covered too much, they are very apt to rot. Various materials are used for forming baskets; some are made of copper wire, which is very durable, but I prefer those made of wood, though they do not last so long. They look better, and are more suitable for the roots of the plants to cling to. The best kind of wood is maple, or hazel, and the best baskets those of a square shape. The wood should be cut into lengths according to the size of basket required, but do not make them too large: there are two objections to this—one is, that they take up much space; the other, that the plants do not require much room. After the wood is cut into proper lengths, the pieces should be bored within one inch from the ends, taking care to have all the holes bored the same distance; there should be four lengths of copper wire, one for each corner; the wire should be put through each piece of wood, and brought up to form the handle for suspending the plants from the roofing. Iron wire should never be used in making baskets, for it is probably injurious to the plants. The best kinds of wood for blocks are acacia, apple, pear, plum, or cork, if it can be obtained. The wood should be cut into lengths, according to the sizes required. Get some nails, and drive one at each end, with some copper wire to form the handle; wind the wire round each nail, and have the handle about ten inches high. Small copper nails are the best by which to fasten the plants on the blocks.—*W. Williams.*

THE HORTICULTURAL SOCIETY'S EXHIBITION, HELD AT CHISWICK JULY 19TH, 1851.—The day was excessively wet, but in defiance of the pelting rain 9,350 visitors attended. There was an unprecedented variety of specimens shown, but not one too many; the display of flowers and fruits was truly noble, and an inspection of the whole would have amply repaid for a journey from the most remote parts of this kingdom. We have not space at present to admit of more remarks, but to give the lists of the superb *Carnations* and *Picotees* shown. They were exhibited *in pots*, with *cards*, and with *admirable effect*.

Amateurs.—Best Twelve Varieties of Carnations, in pots: Open class: 1st prize to C. P. Lochner, Esq., Warwick House, Paddington, for President, Ariel, Sarah Payne, Paul Pry, Squire Trow, Lady Ely, Edgar, Caliban, Lord Rancliffe, Count Pauline, William the Fourth, and Prince Albert; 2nd, to J. W. Newhall, Esq., Woolwich, for William the Fourth, Mercutio, Great Northern, Twyford's Perfection, Brooks's Flora's Garland, Lord Rancliffe, Lydia, Henry Kirke White, Rainbow, Queen Victoria, Gameboy, and President; 3rd, Mr. Norman, Woolwich, for Holliday's Thomas Hewlett, Willmer's Middlesex Hero, May's Duncan, Brook's Flora's Garland, Count Pauline, Queen Victoria, Prince Albert, Beauty of Woodhouse, Sir Joshua Reynolds, Queen Victoria, Willmer's Telemachus, and Lord Rancliffe. Extra prize to Mr. Bragg, Slough, for Queen Victoria, Squire Trow, True Briton, Earl Grey, Sarah Payne, Brook's Flora's Garland, Earl Spencer, Duncan, Count Pauline, Hotspur, Prince de Nassau, and Prince of Wales. Extra prize to Mr. Willmer, for Duke of Wellington, Kay's Majestic, Duke of York, Earl Spencer, Hero of Middlesex, Squire Trow, Holmes's Count Pauline, Halfacre's No. 32, Lord Morpeth, Willmer's Conquering Hero, Willmer's Defiance, and Willmer's Endymion.

Picotees in pots.—1st prize to C. P. Lochner, Esq., for Isabella, Rosalind, Lady Harriet More, Lord Nelson, Venus, Leader, Portia, Amethyst, Ann Page, Lady Dacre, Mrs. Barnard, and Regina; 2nd, to J. W. Newhall, Esq., for Lady Alice Peel, Dodwell's Alfred, Isabella, Lord Nelson, Miss Rosa, Gem, Mrs. Bevan, Mrs. Norman, Venus, Proconsul, Leader, and Jessica; 3rd, to Mr. Norman, for Queen Victoria, Dodwell's Alfred, Cox's Regina, Robinson's Elizabeth, Mrs. Norman, Headley's Venus, Leader, Garrett's King, Mrs. Barnard, Marris's Prince of Wales, Norman's James II., and Norman's Lord Nelson. Extra prize to Mr. Bragg, for L'Elegant, Mrs. Norman, Mrs. Bevan, Leader, Mrs. Buckland, Lord Nelson, Regina, Enchantress, Amethyst, Lady Chesterfield, and two others. Extra prize to Mr. Willmer, for Prince Albert, Giddin's Teaser, L'Elegant, Emperor Bony, Miss Browning, Masterpiece, Leader, Lady Smith, Willmer's 270, May's Sebastian, Willmer's Prince Royal, and Ophelia.

Yellow Picotees in pots, exhibited by Mr. Norman:—Charles X., Romulus, Queen Victoria, Hoyle's Mount Etna, May's Fairy, and Barraud's Euphemia. By Mr. Willmer, collection of Yellow Picotees, cut blooms, 20 varieties, as follows: Topaz, Fairy, Countess of Ashburnham, George III., Queen Victoria, Willmer's Goldfinder, Charles X., La Petit Thomas, May's Malvolio, Willmer's Goldfinder, Willmer's Romulus, Willmer's No. 318, La Petit Reine, L'Empereur, Willmer's Queen, Willmer's No. 282, Braggs's Princess Alice, Queen, La Sapene, Prince Albert, William Catleugh.

WATERING PLANTS IN POTS.—Simple as this seems, nothing in the culture of such plants is more important or requires so judicious management and experience than watering a plant when it wants it, and passing over it when it does not require it. The rule has often been given and explained, "water a plant *thoroughly* when it needs it;" that is, let the moisture reach every fibrous root, then wait patiently till your services are again *necessary*, and give a similar supply. Where the soil is fine and the roots are delicate fibrous ones, always use a fine rose, or a small-sized spout, that allows the water to pass away gently, so as to prevent the surface being torn up. The finer the soil and the finer the fibrous roots, the more indispensible is this attention requisite. For larger strong kinds of plants, which have stronger roots, a coarser soil should be given, and in such cases a coarser rose to the watering can be used, or the water may be poured out of the spout without rose; but to prevent the soil being broken up and hollows be made at the surface, a small piece of tile or an oyster shell may be placed, upon which the water may be poured, and from which it will properly spread equally over the soil.—*A Practical Plant Grower.*

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

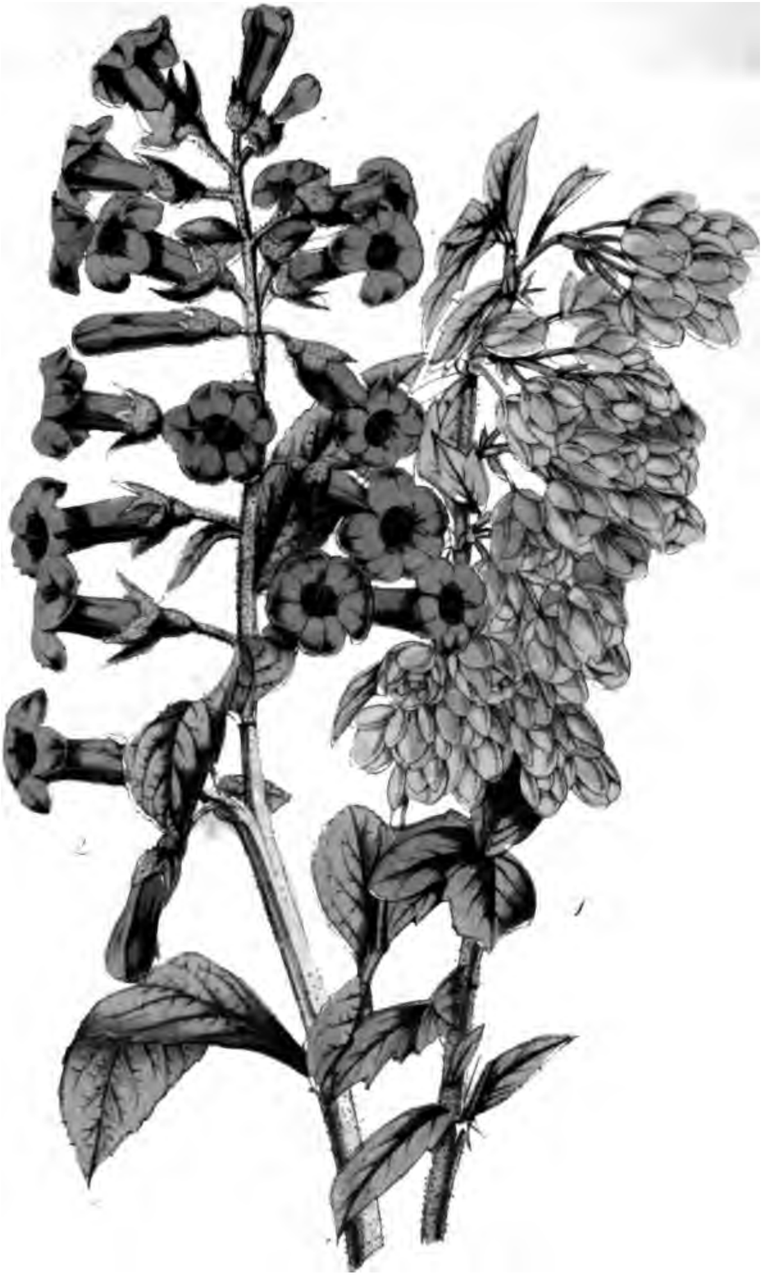
THIS month is the best time for propagating plants for turning out into beds next year; they get well rooted, and, having the leads stopped, are bushy plants by winter setting in, and are well prepared to stand the effects of winter without injury; but before it is proceeded with to any material extent, it is as well that a proper arrangement should be made as to what number of plants are required in another season. Examine the effects of colours; investigate their combinations and contrasts, so as to improve and vary the arrangement another season. To keep up the interest of a garden, especially if planted on the grouping system, requires some considerable skill and forethought, to vary the scene in each succeeding year, so as to prevent the arrangement becoming monotonous. Thus if warm colours prevail to any material extent this season, it would be as well to introduce a majority of cold colours next season, and to edge each bed of the latter with its complimentary warm colour. Indeed, the system of edging beds with contrasting colours imparts a highly interesting feature, especially to such as may be distributed over the lawn without any methodical arrangements.

FLORISTS' FLOWERS.—*Auriculas*, or *Polyanthus:* seedlings that have hitherto been kept in pans or boxes may now be potted singly in small pots; such as were potted earlier will, perhaps, require shifting into a larger size. Plants which were potted in May should have the surface-soil stirred occasionally. *Carnations* and *Picotees:* the principal operation this month will be the layering, which should be proceeded with, and completed as soon as possible. Water over head with a fine rosed pot as often as necessary. *Pinks:* some florists layer the strongest shoots, and pipe the second crop of weaker ones, contending that these last root much more freely. Be that as it may, whether pipings or layers, those intended for next year's blooming are better planted out now, or at least as soon as they are fairly rooted. The beds should be made of well-decomposed dung, sound loam, and leaf-soil, equal parts; in fact, they ought to be rich, as there is little danger of the Pink discolouring. The reason why we prefer planting at this time is that the plants get well established, stand the winter better, and lace much more correctly than when the planting season is deferred. The surplus stock may be put out on store beds. A second crop of pipings may be put in, where it is desirous to increase the stock. *Cinerarias:* as the plants which have been turned out into the open border throw up suckers, they should be carefully removed, potted into small pots, and placed in a cool shady frame until sufficiently established. Sow seed in a light rich soil, and pot off the plants as soon as they have attained sufficient size. *Dahlias:* continued care will be necessary in thinning out laterals as they appear, and securing such as are left against being broken by wind. Lighten up the soil around the plants with a fork, carefully avoiding injury to the young fibres. Towards the middle of the month add a layer, one or two inches deep, of cow-dung around the plants; avoiding such application, however, to all those with large or coarse flowers. *Tulips:* off-sets should be planted towards the end of the month. The bed should, therefore, be prepared, and consist of river-sand and fresh loam in equal portions; plant the young bulbs from two to three inches deep, and let the surface of the bed gently slope from the middle. *Hollyhocks:* where increase is desired, as soon as the flowers fade, the stems should be cut down, and the surrounding surface of the soil stirred up, adding thereon a little well-decayed manure; this will induce them to shoot up vigorously, and afford a numerous division; or they may be increased by cuttings. See articles in last volume. *Pelargoniums:* if the plants cut down last month are not already potted, they should be done at once; some of the cuttings, too, which were potted early, may require another shift. Seed should be sown in pots of light rich soil. *Rose* budding should be completed as early as possible. *Pansies:* continue to propagate, and save seed from the best varieties. *Chrysanthemums* should be re-potted into larger pots for blooming, using a rich soil, and giving an abundant supply of water.

IN THE GREENHOUSE, COLD FRAME, &c.

Light is now more than usually important to elaborate and consolidate the juices before the winter arrives; for unless every means is taken to accomplish this, we may expect sad failures during the next winter among our tender and more valuable exotics. To protect them from rain, and to expose them to light, should now more than ever be our earnest study, in regard to choice specimens, especially those which have been recently shifted, and which are in vigorous growth. Almost all the soft-wooded stove-plants that can be grown into large specimens by one or two seasons' growth, like Pelargoniums, may be conveniently treated like that popular tribe; cut them back after they are done flowering; keep them dry for a week or ten days, and then shake them out of the mould; shorten their large roots, and pot them in light rich compost in a small pot, as their roots can be got into. Where a large conservatory is to be kept gay all the year round, this class of stove-plants is by far the most useful to cultivate, as you can always winter them in little room; whereas fine woody plants will soon get too large, and take some years before they are fit to appear in a good conservatory. Another great advantage is, that as soon as you get these plants established in the new pots, they will only require to be kept in that condition through the winter, and therefore will not require more than 50° of heat for three or four months.

Greenhouses and frames, while they remain empty, should be thoroughly cleansed, repaired, whitewashed, and painted. Cleanliness is not only essential to their appearance and preservation, but to keep the plants in a healthy condition.



1 Berberis Darwinii

2 Escallonia macrantha.

FLORICULTURAL CABINET

SEPTEMBER, 1851.

ILLUSTRATIONS.

1. BERBERIS DARWINII.

THIS very handsome **Evergreen Berberry** has been introduced into this country by Messrs. Veitch. Their collector, Mr. Lobb, found it in South Chili. It was first discovered by Mr. Darwin, and subsequently by Mr. Bridges, Mr. Lobb, and others. It forms a *bushy shrub*, growing from three to five feet high, and proves to be *quite hardy*. It is a free-growing plant, and flourishes out-doors in Messrs. Veitch's nursery. The leaves are about three-quarters of an inch long, of a dark glossy green, and produced copiously. The racemes of flowers are borne in abundance, and their footstalks are beautifully tinged with red, which contrast very prettily with the blossoms. It is considered to be the best *hardy evergreen shrub* which has been imported into this country for many years. It merits a place in every shrubbery. We are informed it succeeds well in a greenhouse, and blooms most charmingly in pots in spring. We saw a fine plant of it in a pot, recently exhibited by Messrs. Veitch, which was in profuse bloom.

2. ESCALLONIA MACRANTHA.

A handsome **hardy evergreen bushy shrub**, growing from four to six feet high. It was introduced by Messrs. Veitch from Chili. When out of bloom it resembles a smallish-leaved Arbutus. It grows freely either as a bush or trained against a wall, blooming from May to the end of summer, and does best in dry situations. It is a valuable acquisition, and deserves a place in every collection of hardy shrubs.

NOTES ON NEW OR RARE PLANTS.

Æsculus Hippocastanum flore-pleno. Double-flowered Horse Chestnut.—This handsome variety is but little known. It is very ornamental, vigorous as a common sort. The panicle of flowers is equally so, and they are as double as those of the best Hyacinths, of a pale blush, with a deeper-coloured centre. It well merits a place wherever it can be admitted. Plants have been imported from the Continent.

ALLAMANDA NERIIFOLIA. OLEANDER-LEAVED.—Messrs. Lucombe and Pince obtained this magnificent species from the Continent. It forms a handsome erect evergreen shrub, and the original plant is now but three feet high. It commenced blooming when but half this height, and the first panicle or cluster of flowers consisted of thirty blossoms. The panicles are terminal. It blooms freely when treated as a pot plant, and trained round a framework. A mixture of light loam and leaf-mould, with a good drainage, suits it, and, when growing, it requires a liberal supply of water. It grows and blooms freely. The flower is between funnel and bell shape, the tube being wide, an inch long, and the expanded five-parted limb is nearly three inches across, of a deep golden-yellow, elegantly streaked with orange. It is one of the finest hot-house plants, taking up little room, and producing an elegant display. It ought to be in every stove, and it probably would succeed well in a warmish greenhouse. (Figured in *Bot. Mag.*, 4594.)

ARBUTUS MOLLIS. SOFT-LEAVED.—A handsome evergreen *shrub*, or perhaps *tree*, a native of Mexico, which flourishes in a warm greenhouse, but is tolerably hardy. The leaves are leathery, of the form of our old Arbutus of the shrubbery. The flowers are borne in a terminal panicle, each branching raceme of blossoms being about three inches long, and each raceme bearing from fifteen to twenty blossoms. Each blossom is about the size and form of the common Arbutus, white or greenish-rose colour. A very neat shrub, well deserving to be in our collections. Mr. Van Houtte sent the plant into this country, and no doubt can supply it. (Figured in *Bot. Mag.*, 4595.)

BERBERIS UMBELLATA. (Synonyme, B. gracilis; B. angulosa.)—This very pretty hardy species of Berberry forms a bush about four feet high. It is an evergreen, whose leaves are about half an inch broad and two inches long, borne in clusters of five or six together. The flowers are yellow, produced in drooping racemes, each having about twelve blossoms. It is a good plant for the back of a rockwork or bank. When done blooming, its profusion of purple berries render it a pretty object for a long period. It is a native of the Himalayan Mountains; well deserving a place in the shrubbery.

CATHCARTIA VILLOSA.—In the recent travels of Dr. Hooker he found this handsome plant in Sikkim-Himalaya, and named it, in compliment to J. F. Cathcart, Esq., late Judge of Tirrhoot, who devoted his time to the illustration of the botany of that neighbourhood, and superintended the execution, by native artists, of upwards of seven hundred folio coloured plates of Himalayan plants. The present plant is of the Poppy tribe. It is a perennial rooted plant, and has bloomed in an airy frame, in pots, in the Royal Gardens of Kew. The flower-stem is nearly eighteen inches high. Each flower is about two inches across, of a rich yellow colour, its numerous brown anthers contrasting with the petals has a very interesting and beautiful appearance. The leaves are vine-shaped, three inches across. (Figured in *Bot. Mag.*, 4596.)

CLEMATIS AZUREA GIGANTEA LULONI.—This variety was exhibited at the floral exhibition held at Bordeaux. It is an hybrid, raised by M. Lulon, gardener at Libourne. It is *much superior* to any other Clematis, both in its size and blue colour. A silver medal was awarded to M. Lulon.

DEUTZIA GRACILIS.—A native of Japan, but quite as hardy as D. scabra. It forms a shrub in its native country, six to eight feet high. It blooms very profusely. The plants which are in the nurseries of this country are but about two feet high, and even such bloom freely. The flowers are borne in terminal panicles along the sides of the branches. Each blossom is half an inch across, and about twenty of them in each panicle, and of a pure white. It is a charming deciduous shrub, and merits a place in every shrubbery. (Figured in *Magazine of Botany.*)

LABICHEA DIVERSIFOLIA.—This very pretty greenhouse shrubby plant is from the Swan River colony, where it was found by Preiss in rocky places near the Canning River, in the Darling range, on the west side of New Holland. Mr. Glendinning, nurseryman, of Turnham Green, had a plant in bloom last spring. The leaves are narrow, an inch long, sharp pointed, and the plant has a very neat appearance. The flowers belong to the Pea tribe, and in form like those of the yellow-flowered *Cassia*. Each blossom is about three-quarters of an inch across, of a rich bright yellow colour, and red anthers, which produce a pretty contrast. The plant blooms very freely, and the blossoms are produced on the side shoots, from four to six on each raceme. It is very pretty, and well merits a place in the greenhouse. (Figured in *Paxton's Flower Garden.*)

LEUCOTHOE NERIFOLIA. OLEANDER-LEAVED. (Synonyme, Andromeda neriifolia; A. crassifolia.)—It was first found in tropical Brazil by Sellow, and afterwards by Mr. Gardner. It is a moderate-sized shrub, with leathery, oblong, evergreen leaves, about three inches long. The flowers are produced in racemes, each proceeding from the axil of the leaf, and having about twelve blossoms. The flowers are very fleshy, and nearly oval shaped, like some of the Ericas or Andromedas in form, of a rich scarlet, with a white limb. The stems of the raceme and flower-stalk are of a red colour. The entire plant is exceedingly neat, pretty, and showy. The *genus* in appearance is much like the Andromedas, and thrives in light peat soil, well drained. The present *species* should be placed in a cool shady house, or pit, especially during summer, for when exposed to full sun the plant is injured. It is in the nursery of Mr. Cunningham at Comeley Bank, Edinburgh, and it merits a place in every greenhouse or pit-frame. (Figured in *Bot. Mag.*, 4593.)

PELARGONIUM CONDERTI.—A variety, having *double* flowers, was presented at the floral exhibition recently held at Bordeaux, in France; they are of a pretty delicate rose colour, not having any blotch.

Messrs. Lawson, of Edinburgh, exhibited at the recent Caledonian Horticultural show a *double-flowered* Pelargonium, and a variety of Erica Witmoreana having double flowers.

Primula Sikkimensis.—Dr. Hooker sent seeds of this Primrose to the Royal Gardens of Kew, where the plant bloomed the last spring. It is stated to be the pride of all the Alpine Primulas, inhabits wet boggy places, at elevations from twelve to seventeen thousand feet, covering acres with a yellow carpet in May and June. The flower stem rises from one to two feet high, erect, bearing an umbel of golden-yellow flowers, about seven blossoms in each. The flower is about an inch across. It is, perhaps, the tallest Primrose in cultivation. (Figured in *Bot. Mag.*, 4597.)

Siphocampylus amænus.—From South America, and which is cultivated by M. Van Houtte. The plant is half-shrubby branching, having dark green leaves of the medium size. The flowers are produced in *long terminal racemes*, similar to the smaller-growing Lobelias, of a pretty orange-red colour, and the anthers form a yellow centre. Each blossom is about an inch long, and the five-parted end is, when expanded, about the same across. It is a very singular and handsome species, well deserving a place in the stove.

Spirea Douglassi.—Douglas discovered this fine species in North America, on the plains of Oregon. It is a charming hardy shrub of moderate growth, and a very free bloomer. The flowers are produced in a dense, terminal panicle, from four to six inches long, of a deep rose colour. The termination of the head of flowers is not in a *narrow* point, but has a *round* end. It is a very handsome shrub, and deserves a place in every shrubbery.

Thyrsacanthus lilacinus. (Synonyme, Justicia lilacina.)—A stove shrub, from South America, which grows freely, blooms profusely and very ornamental throughout winter. (Figured in *Paxton's Flower Garden.*)

Trichopilia coccinea. (Synonyme, T. marginata.)—A beautiful stove Orchideous Epiphyte, from Central America. Sepals and petals narrow, nearly four inches long, buff tinged with red. The large wide tube of the labellum is white outside, and a rich deep carmine inside. Each blossom is about seven inches across. It has recently bloomed in the stove in the Horticultural Society's garden at Chiswick. (Figured in *Paxton's Flower Garden.*)

THE PROGRESS OF THE PELARGONIUM.

(*Continued from page* 201.)

BY ORION.

There appears to have been a very dull season following the brilliant one (1840), lately described, for very few novelties appeared during the year 1841, and nothing of first-rate or lasting character. Mr. Foster's Life Guardsman was, perhaps, the principal, and though much cracked-up at the time, yet was by no means one of the best of this gentleman's flowers. His Beauty was a great novelty, being one of the first flowers having *deep veins* (with occasionally a blotch) on all the *lower petals*. These flowers have always been more or less popular, and, with Occellatum of the present day, has nearly attained perfection. The same raiser's Nymph was a flower remarkable for the purity of the throat, a quality which had hitherto been rare. Ruby, a very dark flower, a great improvement on Jewess, and Prince Albert, complete the list. All the above of Mr. Foster's were sent out at two guineas, except Nymph, which was priced at three guineas. Mr. Garth's flowers were Bridesmaid, Britannia, Comte de Paris, a very high-coloured orange flower, Corona, and Duenna, which were all advertised at two guineas. A few other flowers of this year do not call for any attention, and are only mentioned to render the list complete; among them were Gaines's Incomparable, Little Wonder, and Prince Albert; two raised by Catleugh, and named Lord Mayor and Lady Mayoress; Mabel, Cressida, Arabella, and Gem of the West, raised by a Mr. Nairn, which was a model as regards form, though the colours were not striking. The whole of these were also advertised at two guineas; but, as stated before, the season was productive of little improvement as compared with the great step in advance attained during the year 1840. About this time the system of *exhibiting seedlings* for prizes came into vogue. Of the varieties sent out in 1841, only four obtained any reward at the show of 1840, which were Nymph, Beauty, Comte de Paris, and Bridesmaid: so that this would afford a good proof that the year 1840 saw but little improvement or novelty. As stated in the last article, the brilliant success attending the season of 1840 caused many exhibitors and seedling raisers to redouble their exertions; and accordingly we find that in the season 1842, now about to be described, an immense number of novelties and good flowers made their first appearance, seven of which were rewarded as seedlings the previous year. They are distinguished by an (*) prefixed to their names, as will be the case with all varieties (hereafter named) which have been rewarded at any of the London exhibitions. *Rising Sun (Gaines) was the most celebrated flower of the year, and was priced at five guineas; it was of the form of the same raiser's King, and much in the same way, but of a bright light orange-scarlet colour. The same grower also raised and sent out Amaranth and *Captivation at two guineas; and Duchess of Kent and *Caroline at three guineas. Mr. Foster's flowers were *Prince of Waterloo, a striking high-coloured flower, sent out at two guineas; Jessie, at three guineas; Amulet, a small but very bright flower, one guinea; Augusta, two guineas; Bertha, which was, perhaps, an improvement on the same raiser's Nymph, one guinea; Comus, in the way of Beauty, but darker, two guineas; Gipsey, two guineas; Jew, Rhoda, and Selina, thirty shillings each; also Medora, two guineas: this last variety was very novel in colour, and was the forerunner of many others in the same style, as, for instance, Leonora, Cleopatra, and others. Mr. Garth's flowers were Queen of Fairies, at three guineas; Queen of Beauties, Douglas, Evadne, Evelyn,

Flash (figured in the **Cabinet** at the time), **Jubilee**, **Tournament**, **Wonder**, and **Witch**, all at two guineas; the last named was an acquisition, a white with deep plum-coloured spots, and veined, the *beginning* of a class *now* very much improved, and at present represented by **Virgin Queen**, **Village Maid**, &c. Three other splendid and first-rate varieties also appeared, viz., **Camilla**, a very useful white; **Fair Maid of Devon**, a showy pink; and **Glory of Jersey**, all priced at three guineas. Mr. Lumsden also had his **Madeline**, a very *free* blooming crimson variety, much grown even now, and **Cerito**, each priced at two guineas. Kinghorn's **Grand Monarch** was also sent out at this time at two guineas, and was a good selling flower; **Lady Cotton Sheppard**, one guinea; **Priory King**, two guineas; and **Vanguard**, three guineas, must suffice to complete this already extended list for this year.

From the above brief summary it will be seen that another great step was made in the onward movement, and served in some respect to compensate for the slow progress of the preceding season. Four only of them are marked as having prizes, the other three not being sent out until the following year. The grand improvement aimed at about this time, and with good success, was to produce *stiff flowers*, which did not *curve back;* and many of the varieties named above far exceeded all that had been produced before in this highly necessary quality. The year 1843 must be reserved for the next number.

CULTIVATION OF ACACIAS.

BY HORTULANUS, OF KEW, SURREY.

It has been with pleasure I have noticed in the last three volumes of your Magazine numerous descriptive particulars of the lovely family of Acacias which are in the Royal Gardens of Kew, and which, during the blooming season, are not only beautifully gay with their profusion of yellow flowers of various hues, but the *very large greenhouse* is filled with a delightful perfume. The far greater number of them bloom from February to June; but there are a few which bloom from July to February.

The plants are interestingly pretty even when out of bloom. They flower, too, when small, with one or two exceptions, and are easily kept, by pruning, pinching off the leads, &c., to any desired size; and such plants bloom in proportionate profusion, as do the larger ones. Every greenhouse ought to have a selection of them; they are easy of cultivation and increase, and, growing quickly, soon become charming ornaments; and, what is acceptable, too, Acacias may be procured at the nurseries at a very cheap rate, and, once obtained, are easily kept. They are alike suited for the conservatory and greenhouse; and the family contains species suited to any height, from one foot to fifty feet or more.

When grown in pots, the more robust should have a less rich soil than the others, which checks the luxuriance, but does not render them less proliferous in flowers. All require a good degree of pot-room, to be well drained, and flourish in equal parts of rich loam, sandy peat, and well-rotted leaf-mould; the latter to be withheld from such as it is desired should not grow robust. The compost should not be sifted, but broken by the hand. In the growing season they require a liberal supply of water; but when the new wood is become firm, then a less quantity will only be necessary. The plants must be repotted as soon as the bloom declines; then the new wood begins to push which is to bear the next season's flowers; so that repotting just when about to push shoots, the new wood gets strengthened to bloom satisfactorily the following year.

Many of the kinds produce seed, and this provides a ready means of increase. If ripe seed is obtained by the end of August, sow it immediately in pots; and previously to doing so soak it in warm water, say 120°, and let them be in the water several hours before sowing, and the pot be placed in moist heat in preference. To increase them by cuttings, let the *new shoots* become just firm, or what is termed half ripe; then cut the portions close under a bud, and insert them in sand.

The following species are the most handsome, and merit a place in every collection:—

A. LINEATA.—Flower heads are rather small, a rich deep yellow, in vast profusion; the leaves are narrow, an inch long. This is particularly handsome, and ought to be in every greenhouse.

A. CELUSTRIFOLIA.—Flowers pretty sulphur, and in very dense panicles; leaves glaucous, two inches long.

A. PROMINENS.—Flowers a bright yellow, borne in profusion; leaf narrow, an inch and a-half long.

A. GRAVEOLENS.—Flowers nearly white; the leaves two inches and a-half long.

A. SOPHORÆ.—The flowers are produced in large branching heads, pale yellow, in profusion; leaves broad, lance-shaped, three inches long. A fine species.

A. VERTICILLATA.—Flowers a light yellow, and in profusion; leaves an inch and a-half long. Very handsome.

A. LONGIFOLIA.—Flowers a light yellow, the spikes being erect; the branches are literally full: leaves lance-shaped. It is a very beautiful species.

A. HYBRIDA.—Flowers a light yellow, globular. Pretty.

A. PRÆMORSA.—Flowers a pale yellow; a profuse bloomer.

A. PULCHELLA.—Flowers deep golden balls, very profuse; Mimosa-like foliage. A very beautiful species.

A. TRINERVATA.—Flowers a pale yellow, delicate and pretty; the leaves are narrow and an inch long. It is a handsome bushy plant.

A. DECIPIENS.—Flowers sulphur colour; the leaves are of a triangular form, half an inch across. The plant forms a neat bush.

A. ROTUNDIFOLIA.—The leaves are circular, a quarter of an inch across. It is a very neat bushy plant, the flowers are a bright yellow colour, and produced in profusion, and beautiful.

A. VESTITA.—The leaves are half an inch long. It is a very neat bushy plant. The flowers are borne in large branching spikes, and along them the blossoms are produced in short racemes of ten or twelve in each; they are a pretty light yellow colour. It is a handsome species.

A. PRÆMORSA.—The leaves are short, and the plant forms a pretty bush, blooming very profusely; flowers a rich yellow. Very pretty.

A. DENTIFERA.—The leaves are four inches long, very narrow; it forms a neat branching bush. The flowers are a rich deep yellow colour, and the globular heads large. It is a very beautiful species.

A. OVATA.—The leaves are oval-shaped, half an inch across; it is a very neat bushy plant. The flowers are produced in long spikes, and are a rich yellow colour. It is a very lovely species.

A. LEPTOREURA.—Leaves like a thinly-foliaged Pinus, about three inches long. The flowers are a deep yellow. It is singularly pretty.

A. PUBESCENS.—Neat small foliage; and the rich yellow globe flowers, borne in *drooping* panicles, are very handsome.

A. DECURRENS.—Deep yellow, in large branching panicles. Very showy.

A. SQUAMATA.—The foliage is small, and the branches are drooping, bearing a vast profusion of deep golden-coloured flowers. It is a very interesting and handsome species.

A. RICEANA.—Small Pinus-like leaves. The flowers are borne in cone-shaped heads, profusely, of a pale yellow colour. A very neat species.

A. UNDULÆFOLIA.—Flowers a rich yellow; singular foliage. Pretty.

A. LANCIFOLIA.—Pretty lance-shaped leaves, and bright yellow globe flowers.

THE ATMOSPHERE OF PLANT-HOUSES, VIZ., STOVES, &c.

BY FLORISTA.

THIS subject not having been noticed in your Magazine, and being one in which all cultivators of in-door plants are specially connected with, I am induced to transmit the following particulars upon the same for insertion in an early number:—

Some idea may be formed of the prodigiously increased drain upon the functions of a plant, arising from an increase of dryness in the air, from the following consideration. If we suppose the amount of its perspiration, in a given time, to be 57 grains, the temperature of the air being 75°, and the dew-point 70, or the saturation of the air being 849, the amount would be increased to 120 grains in the same time, if the dew-point were to remain stationary, and the temperature were to rise to 80°; or, in other words, if the saturation of the air were to fall to 726.

Besides this power of transpiration, the leaves of vegetables exercise also an absorbent function, which must be no less disarranged by *any deficiency of moisture.* Some plants derive the greatest portion of their nutriment from the *vaporous atmosphere,* and all are *more or less dependent* upon the same source. The Nepenthes distillatoria (Pitcher plant) lays up a store of water in the cup formed at the end of its leaves, which is probably secreted from the air, and applied to the exigencies of the plant when exposed to drought; and the quantity which is known to vary in the hothouse is no doubt connected with the state of moisture of the atmosphere.

These considerations must be sufficient, I imagine, to place in a strong light the necessity of a strict attention to the atmosphere of vapour in our artificial climates, and to enforce as absolute an imitation as possible of the example of nature. The means of effecting this is the next object of our inquiry.

Tropical plants in stoves require to be watered at the root with great caution; and it is impossible that *a sufficient* supply of moisture can be kept up from this source alone. There can, however, be no difficulty in keeping the floor of the house and flues constantly wet; and an atmosphere of great elasticity may thus be maintained in a way perfectly analogous to natural process. Where steam is employed as the means of communicating heat, an occasional injection of it into the air may also be had recourse to; but this method would require much attention on the part of the superintendent, whereas the first cannot easily be carried to excess.

It is true that damp air, or floating moisture of long continuance, would also be detrimental to the health of the plants, for it is absolutely necessary that the process of transpiration should proceed; but there is no danger that the high temperature of the hothouse should ever attain the point of saturation by spontaneous evaporation. The temperature of the external air will always keep down the force of the vapour; for as in the natural atmosphere the dew-point at the surface of the earth is regulated by the cold of the upper regions, so in a house the point of deposition is governed by the temperature of the glass with which it is in contact. In a well-ventilated hothouse, by watering the floor in summer we may bring the dew-point within four or five degrees of the temperature of the air, and the glass will be perfectly free from moisture; by closing the ventilators we shall probably raise the heat ten or fifteen degrees, but the degree of saturation will remain nearly the same, and a copious dew will quickly form upon the glass, and will shortly run down in streams. A process of distillation is thus established, which prevents the vapour from attaining the full elasticity of the temperature.

The action is beneficial within certain limits, and at particular seasons of the year; but when the external air is very cold, or radiation proceeds very rapidly, it may become excessive and prejudicial. It is a well-known fact, but one which, I believe, has never yet been properly explained, that by attempting to keep up in a hothouse the same degree of heat *at night* as during *the day*, the plants become scorched. From what has been premised, it will be evident that this is owing to the low temperature of the glass, and the consequent low dew-point in the house, which occasions a degree of dryness which quickly exhausts the juices.

Much of this evil might be prevented by such simple and cheap means as an external covering of mats or canvass.

The heat of the glass of a hothouse at night does not probably exceed the mean of the external and internal air; and taking these at 80° and pots, in the proper season, are moved into the open air, it would contribute greatly to their health, and preserve them from the effects of too great evaporation, to imbed them well in moss or litter. As a substitute for this precaution, the plants are generally exposed to a northern or eastern aspect, where the influence of the sun but rarely reaches them, but which would be very beneficial if their roots were properly protected. The advantage of such a protection may be seen when the pots are plunged into the soil—a method which communicates the greatest luxuriance to the plants, but unfits them to resume their winter stations.

ON MANURES.

BY A PRACTITIONER.

MANURES which stand next to the mineral mixtures of sandy clay and chalk are potash and carbon, which may be obtained in a mass, cheaply and readily, by digging a hole, paving the bottom, and by putting into it all weeds and refuse vegetables, and occasionally a layer of quicklime, refuse water from the house, particularly soapsuds (which contain potash), chamber-lye, refuse from the pigs, cows, slop-pail, &c.; these will in a few months be so decomposed and enriched by the aid of the lime, that a mass of potash and carbon will be obtained, and these are the origin and basis of all vegetables.

An accumulated mass of manure should never be allowed to have the liquor run away from it, for its very essence is potash (a piece of wood can have its potash washed out by continual running). All dung-heaps, therefore, should have an earth under them of a different nature to the soil which they are intended for as a dressing; for example, if we desire to enrich a heavy clay soil, we must have sand or road-scrapings, and a little lime, if it can be procured, laid under each dung-heap; and if we desire to enrich a sandy loam, we must lay chalk and marl, or chalk and clay, under our dung-heaps. For the husbandry of manures and their increase, let all animals be kept with a sand or other earth under their litter at all times, to soak up the moisture; a turf might be lined over the stable, cow-house, or pig-sty, and removed every week, and thus would a great accumulation of vegetable stimulus be obtained, and this, indeed, would be a husbandman-like process, a gathering of gold.

Stable Dungs, which ferment, should be buried in the ground as early as possible after coming from the horses, for every gas or steam which passes from it fermenting is a loss of its nutritive substance, for all manures are but a concentrated mass of gases; air and water, or their component parts, are the bases of all manures which have vegetable origins.

Sugar Scum is a favourite manure for those lands where there is a want of chalky matter, particularly on the sands, previously to a crop of turnips; but this scum is principally composed of lime: and a better article can be obtained from pounded chalk that has soaked up the juices from a dung-hill.

Soap Ashes are composed of lime (converted again into chalk) and soda. This is a good and lasting dressing on a dry sandy soil.

Rough Potash, from saltpetre works, is the best of all dressings; it is the vegetable itself concentrated in a state ready to enter at once into the fibres of young roots of plants when aided by water.

Lime, when thrown over land, is quickly converted again into chalk by imbibing from the air that acid which had been driven off by fire: hence chalk is as good if put on the land in the winter, because the frost, acting on the water in it, expands and crumbles the article to pieces.

Salt is a soda in union with an acid, and acts on land in the same manner as many other manures, by holding moisture for the service of vegetation; but the article of common salt does not enter so much into the composition of land vegetables as the salt of potash, that is, saltpetre, or vegetable alkali, as it is called.

Cheap efficacious Manure.—Raise a platform of earth on the headland of a field, eight inches high, and of any width and length, according to the quantity wanted. On the first stratum of earth lay a thin stratum of lime from the kiln; dissolve or slake this with salt brine from the rose of a watering pot; add immediately another layer eight inches thick of earth, then lime and brine as before, carrying it to any convenient height. In a week it should be turned over, carefully broken and mixed, so that the mass may be thoroughly incorporated. This compost has been used in Ireland, has doubled the crops of potatoes and cabbages, and is superior to stable dung.

Gypsum is a dressing used with a variety of effects on different lands, and for different purposes; it is a lime in union with sulphur, being a refuse from plaster-makers. Those crops which are cut green take up gypsum, which constitutes a part of their substance, such as sainfoin, clover, lucern, peas, tares, and such like crops. To these this mineral dressing will be good; but it is injurious on a chalky land, and when animal and vegetable manures are easily obtained it is not worth using, for they yield a sufficiency of gypsum to the soil. Sir H. Davy considered that an acre of tares took up several pounds of gypsum.

Bone Dust is now a very favourite dressing for turnips, and, indeed, many other crops; it is principally composed of lime and phosphorus, which readily enter into the composition of grain and all grasses. A portion of lime and phosphorus is also found in all milk, and goes to form the bones of young animals which suck; the staler the milk, the less phosphorate of lime is there in it. This bone-dressing for land is a very expensive article, and should be cautiously used. Coal-ashes, especially if laid under dung-heaps, are an excellent dressing for clays, by opening and enriching the soil, and, like soot, impart a carbon or charcoal to the soil, of which all clays are deficient.

In all these manures we find lime an active principle, except in the salt dressings. Lime imbibes carbon, which is the woody principle, and also holds moisture for the service of vegetation. If we cannot procure large quantities of these manures, we must entice air and water to the roots of plants by every means in our power; and this may be done with the greatest facility by repeated movings of the surface, a hoeing being equal to a shower of rain.

WATERING FLOWER GARDENS.

BY AN AMATEUR.

The soil of my flower garden is a very sandy loam, upon a deep gravelly substratum. From this circumstance I am compelled to water all the flower-beds during dry weather. I am aware of objectors to this practice stating that such application does much more harm than good. This might be true to some extent, if the surface only was just moistened. Such watering will encourage, perhaps, the pushing of a few fibrous roots into the moist surface soil, which a day or two of hot sun will destroy; and whilst this system is going on, the plant, being dry below, is gradually dying. Now my plan has been, during the last two months, to have the surface loosened three or four inches deep by hoeing, and leaving without being raked, and this uneven open surface admitted the water applied to sink below. I had the surface thus disturbed once a-week. The gutta-percha tubing being advertised in this Magazine, I purchased a sufficient length at a trifling cost; and having a pond of soft water situated a few yards higher than my garden-ground, I laid one end of the tubing in the pond (one hundred yards off from the garden), and having the other end in my garden, I could move it quite readily to every part, and thus with ease I gave the beds sufficient to sink through the entire soil on each occasion. This enabled the roots to supply the foliage with what is lost by perspiration, and necessary for sustaining the proper vitality thereof. I repeated the watering once a-week, and the plants are in robust health and profuse bloom. The piping is easily unrolled over the ground, and when done with, readily coiled up. A tank of water, *being higher* than the ground to be watered, will, of course, afford a supply, if there be not the advantage of a pond or other reservoir. The essentials in having the plants healthy in dry seasons are, having the surface of the border deeply loosened, and left in a rough-surfaced state; and when water is requisite, let it sink as deep as the general portion of the roots do.

BRIEF REMARKS.

FORM OF THE FLOWER OF A CALCEOLARIA.—In my recent readings and visits to Floricultural Exhibitions I find some difference exists as to what is the *best form* of the Calceolaria; and at two of the shows I recently attended near London a considerable disturbance arose with two exhibitors of these flowers, the decision of the judges being unsatisfactory to one of the parties. The *best specimen* to which the judges awarded the first prize had flowers of the middle size, good circular outline, free from indentations (or hollows) at the edge; and whilst the back part of the flower was nearly flat, the front was well swelled out, and the throat of the blossom was almost hidden.

The *second best specimen* had much larger flowers than the former, somewhat longer than broad, and the outline free from indentation; but the front was not so full as the flowers of the former. Both varieties had a rich deep yellow ground, and beautifully blotched in the face.

I should be glad if some connoisseur of this lovely tribe of flowers would give me his opinion of the best properties of a flower—what would generally be approved of as a model to aim at, and decide by.

Glenny, on the properties of the Calceolaria, states: "The individual flower depends entirely on the form of the purse (pouch of some persons); it should be a perfect *round* hollow ball; the orifice or calyx cannot be too small, nor the flower too large." By this I am informed I am to understand that the flower is to be a *perfect globe*. I am aware some of the very old kinds, as the annual C. pinnata, and one or two of the old bedding varieties, which have flowers about the size of a pea, have globe-shaped flowers; but of the general class of show Calceolarias, I never saw or heard of one being a *globe* shaped. I think, too, that the perfect *globe* would not be so handsome as the flower that has a perfect circular outline of face, and the front about *half* of *half-a globe* shape, in which form its markings is much better seen than it could be if a flower was a globe. Such a standard as I suggest I respectfully submit as a standard.—*An Old Grower of Calceolarias.*

On Tussilago fragrans (Heliotrope-scented).—I do not know any border plant that is a greater favourite with the ladies than this beautiful Heliotrope-scented flower, either growing in pots, or as a cut flower; and to insure a regular or ample supply of flowering plants, it is only requisite to prepare a steep bank facing the south, and sloping to an angle of about 45°. About the middle of June fill it with plants six inches apart, and cover the surface of the bank with at least six inches of ordinary garden-mould. No further attention is necessary till the end of October, when it will be observed that almost every flower has formed a bold-swelling flower-bud, from which a sufficient supply either for the greenhouse or the market may be potted off. By keeping part in a cold frame, a succession may be retarded, and thus a supply obtained till the end of March, when the season will furnish an ample stock of other flowering plants to take its place. The plantation made in June will continue to furnish plenty of flowering plants the second year after planting, but should be afterwards renewed, as the flowering plants become weaker and far fewer in number after the soil is exhausted by bearing a succession of the same sort of crop. A few leaves thrown over the bank will protect many of the flowers in ordinary winters, and retard their flowering till the beginning of spring.

On Yeast as a Manure.—Having seen the most surprising effects from refuse barm or yeast, diluted with water, and distributed over grass lands, I am induced to call the attention of some of your correspondents more particularly to its use, where it can be readily obtained, as it seems to be the most powerful manure we have for new grass lands, applied early in the spring; and for plants generally requiring a rich compost it is highly beneficial, given in a very diluted state. Composts for Roses, Geraniums, Dahlias, &c., are greatly improved by the addition of a small quantity of putrid yeast in a fluid state. It acts as a powerful exciter to the whole mass of vegetable matter; the results arising from the fermentation and decomposition of which, and their effects in stimulating vegetation, are well known.—*Clericus.*

DESTROYING WEEDS UPON WALKS.—Among the objects of horticultural interest at the Industrial Exhibition (Class IX., No. 233) is a machine for destroying weeds, moss, lichens, &c., on gravel-walks, court-yards, &c., invented by Mr. Fleming, of Trentham. This machine may be described as a large wrought-iron boiler, fitted upon wheels, with a fire-place in the centre for the purpose of heating the water to a boiling temperature. Connected with the boiler is a spring valve and delivery pipe, similar to those used upon common watering-carts, through which boiling salt-water is delivered in a continuous and gentle shower, the salt being mixed in the proportion of two pounds to each gallon of water. This, at Trentham, is found to be very effectual, and the expense of the application a mere fraction, compared with the expense of hand-weeding. The contrivance is ingenious; but if the liquid be applied very hot and strong, where there is grass, box, thrift, or similar edging, some care will be required to prevent its being injured. A small ridge of sand, or any similar article, formed all along the side of the edging, will prevent the water coming into direct contact with the plants. A small ridge is easily made by having a simple machine, similar to what is used by the farmer to sow one row at a time of turnip seed, or scatter bone-dust in the row, &c. A good-sized box of sand or other material thus run along would serve for a considerable distance, and be very readily done.—*T. R.*

RULES FOR EXHIBITORS AND JUDGES AT HORTICULTURAL MEETINGS.—During the spring of 1851 I entered to my first situation as gardener in Yorkshire. A very respectable Horticultural Society's exhibition recently took place in the neighbourhood of the place I reside at. Having but lately come, and not taking any articles to exhibit, I was supposed to be so far disinterested; and one of the three previously selected judges not being at liberty to fulfil his engagement, I was solicited to supply the vacancy thus occasioned. In the course of our inspection we had under consideration eighteen collections of Pelargoniums, which included the General Class as well as the Fancy Class. Here a difficulty arose to myself relative to the proper decision to be given upon some collections shown. The following are the particulars:—

Prizes were offered for the best twelve Pelargoniums (of the large flowering class) and for the best eight of the Fancy Class. Of the former there were two collections of rather old varieties; but they were admirably grown and in excellent bloom, and large specimens. There were two other collections, much smaller plants, tolerably well bloomed, and the varieties shown were of much better form than those of the older kinds. The difficulty was as follows: The pots in which the plants were grown were of the same size. The collections of older varieties were one year older than the new kinds, and the plants were in consequence larger and better bloomed. But, as before observed, the varieties of new kinds had much superior-formed flowers. The wording of the schedule stating only the BEST twelve and the BEST eight brought me into this dilemma—Did the "best" apply to the *management* of the plants, as being the *best* plants and *best* bloomed? or did it refer to GOOD MANAGED plants (but inferior to the larger ones mentioned), of newer and superior formed flowers? It appeared to me that it would be best to give a prize for the *best-managed* specimens, and another prize for the BEST MANAGED of the *best varieties in form of flowers.*

It is very probable I may be called to sustain such an office again, and I should be glad to have the suggestions of some older in the office than myself, that I may be enabled to stand with the majority in future, for my two colleagues outvoted me on this occasion, and persisted in the old course, to the dissatisfaction of the exhibitors in both classes of Pelargoniums. I am satisfied that the schedules ought to be more definitely arranged, so that not only may the judges have correct rules to go by, but that losing exhibitors may be directed to properly-defined regulations in the schedules of that particular exhibition. I hope for advice in the next number of your Magazine.—*Junius.*

GREAT NORTHERN TULIP SHOW.—In our last number we inserted the particulars of the winning Tulips, &c. Mr. Wood, who was one of the judges, notices the following varieties in the *Midland Florist* as being very superb specimens:—

Feathered Bizarres.—Royal Sovereign (synonymes, Charles X., Platoff), a very fine variety. Earl Douglas, a short pure cup and perfect feather. Polyphemus: few can touch this magnificent variety when in good character. Duke of Devonshire should be grown in every collection. Surpass Catafalque, large and good; a safe variety. Sir Sidney Smith and Ulysses are very desirable varieties; and Duc de Savoy, excellent of its kind.

Flamed Bizarres.—Captain White, especially distinguishable; its specimens were first-rate. Pilot: its form and purity is undeniable, but sometimes has too heavy a flame. Polyphemus (flamed), fine cup, rich and dark marking: its stout and leather-like petals render it a perfect model. Hamlet, in the same way as the last. Strong's King, not with sufficient *feather* in conjunction with *flame*, is still very beautiful. Marshal Soult and Optimus were very pretty; also Grandeur Magnifique (or flamed Catafalque), good in form, and rich in colour and marking.

Feathered Byblœmens. — Lancashire Hero, splendidly marked. Eclipse, a pretty feathered flower. Queen of the North, delicate and beautifully clean. Maid of Orleans, a very nice flower. Lord Denman was *feathered*, though its usual character is flame: one of the most beautiful marking flowers grown, rather too narrow at the base. Lord Gough and Byzantium are very attractive varieties. Kosciusko is a chaste and beautiful variety.

Flamed Byblœmens.—Queen Charlotte asserted her supremacy, and will beat any other of its class. Princess Royal, a fine pure and bold flower, with many good qualities. Violet Brun, perfection in the way of purity and marking, form beyond the average. La Bien Amie has purity and good marking.

Rose Class.—Lac (*true*); sometimes Guerrier is known as Lac in some localities. The *true* is a splendidly marked flower, *flame* and *feather*, colour very pleasing, and the white as pure as driven snow. Heroine (or *feathered* Triomphe Royale), a very safe flower, a splendid variety, and a dozen of it ought to be in every bed. Aglai, feathered, a most desirable variety, beat Heroine. Napoleon, beautiful feather, pure and excellent, a formidable rival.

Flamed Roses.—Triomphe Royale, a splendid flower. Aglai, equally so. Camilla, very pretty. La Vandikken, Fanny Cerito, and Vesta, all good.

Breeder Tulips.—Pilot, excellent in form and purity. Princess Royal, excellent and pure. Catharine, very superb.

Novelties.—Blue Bell, feathered Byblœmen, very pretty. Magnet, feathered Bizarre, very neat and attractive. Van Amburg, flamed Byblœmen, when true in character, is a splendid flower; it is apt to have a yellow-tinged base. Sir Thomas, flamed Bizarre, very attractive, but unfortunately stained.

At this show some flowers had lost some of their *anthers*. All such blooms were disqualified, however excellent in other respects.

VAUXHALL GARDENS, LONDON.—Another interesting show of flowers, fruits, &c., was held on Wednesday EVENING, the 20th of August. The collections of miscellaneous plants were numerous, and of DAHLIAS there were twenty-one stands, exhibited by amateur growers, and eight stands by nurserymen. The blooms were, for this early season, in very good condition. Amongst the varieties exhibited that were sent out last spring, we noticed the following in good condition: —Nil Desperandum, scarlet, full and large; Roundhead, salmon; Summit of Perfection, purple; Sir C. Napier, vivid scarlet; Admiral, lilac; Nepaulese Prince, maroon; Mr. Herbert, orange; Gem of the Grove, purple; Model, bronze; Leda, orange; Queen of Dahlias, pale lilac; Mrs. Hansard, yellow, tipped with white; Elegantissima, white and bluish purple; and Pretty Polly, red and white. The following old but favourite sorts were shown in good order:—Duke of Wellington, Mr. and Mrs. Seldon, Fearless, Essex Triumph, Richard Cobden, Scarlet Gem, Privateer, Princess Radziville, Shylock, Black Prince, Nonpareil, and Queen of Lilacs. Among the HOLLYHOCKS were good blooms of Charles Baron, Comet, Rosy Queen, Magnum Bonum, Aurantia, Enchantress, Charles Turner (seedling), Susanna, Sir D. Wedderburn, Model of Perfection, Lord Willoughby d'Eresby, Venosa rubra, Nobellissima, Prince Albert, Delicata, Standard of Perfection, Rosea Alba, Rosea grandiflora, Elegans, Eclipse, Sulphurea perfecta, Premier, Beauty of Haverhill, Bella Donna, Lady Clark, Bessy Bell, General Bem, Qüeen of Whites, Andrucana, Queen, Obscura, Napoleon, Caroline, Pitho, Subrano, Waldren Gem, Mount Etna, Mulberry Superb, Formosa, Bicolor, President, Queen of Lilacs, Snowflake, Princess Alice, Watford Surprise, and Conspicua. FUCHSIAS consisted of—*Dark Varieties:* Eppsii, Exoniensis, Serratifolia, Orion, Prince Albert, Orestes, Inaccessible, Sir J. Falstaff, Don Giovanni, Magnificent, Exquisite, Kossuth, Sir R. Peel, Corallina, Dr. Smith, Splendida, Clapton Hero, and Nonpareil.—*Light Kinds:* Fair Rosamond, Duchess de Bordeaux, Pearl of England, Queen Elizabeth, One in the Ring, Diana, Dr. Jephson, Globosa alba grandiflora, Napoleon, Purity, and Gem of the West.

SUPERB FLOWERING PLANTS IN BLOOM IN THE ROYAL GARDENS AT KEW.—*In the Open Borders.*—*Tritoma uvaria:* Several large plants are in fine bloom. One has forty-four spikes of flowers, the stem of each about four feet high, and the spikes from six to ten inches long. Each blossom is tube-shaped, two inches long, and the stem is very thickly set with them all round. In their early stage they are of a light scarlet, but change to a rich yellow, the contrast being very pretty. The plants continue in bloom most of the summer, and are exceedingly ornamental, well deserving a place in every flower garden.

Tritoma media is also very showy, the spikes of flowers being half a yard long, and the blossoms about three inches, red, tipped with yellow. Very pretty.

Pentstemon elegans.—The blossoms are an inch and a-half long, of a pretty rose colour, produced in profusion. Plant half a yard high.

P. digitalis.—Blossoms wide tube-shaped, an inch and a-half long, white, produced in profusion, are very pretty, contrasting nicely with the rich-coloured ones.

P. hirsutus.—Wide tube-shaped, an inch and a-half long, blue, with a white five-parted end. Neat and pretty.

P. Themisteri.—Tube wide, an inch and half long, light pink. A medium-sized plant, but very neat.

Pyrethrum Parthenium, pleno.—Plant grows about a foot high, and blooms in vast profusion, each blossom being very double, an inch across, of a snow white. It is the best *white-blossomed* plant we have seen for a bed.

Lantana delicatissima.—This is a very neat bedding plant, grows about a foot high; the heads of flowers are an inch and a-half across, lilac, with a white eye. The centre of a bed is composed of this, and surrounded with the dwarfer *L. Sellowii*, the blossoms of which are darker. The plants require to be placed close enough to become a compact mass, and then forms a beautiful neat bed.

Zauchneria californica.—There is a bed of it in most *profuse* bloom, one foot to eighteen inches high, the light orange-scarlet flowers being very showy. To keep the plants erect, it is necessary to have from the first sticks about nine inches high pricked closely among the plants; this will keep them upright, and the flowers show well.

The following Pelargoniums are excellent bedding varieties, which we have seen proved, being free bloomers, and not having too much leaf. They are such as our readers may fully depend upon for a fine display of bloom. We give them thus early, that persons desirous of having such for beds next year may now procure bushy plants from which cuttings may immediately be taken, and a stock of young plants be provided this autumn:—

P. diadematum rubrum.—The flowers are large, in fine trusses, of a showy rosy-crimson, tinged with purple. They stand out well above the foliage. An admirable variety.

P. variegatum.—Leaves of a deep green, with a broad margin of creamy-white, edge rather deeply cut. The flowers are of a bright red, petals narrow; but the numerous trusses of flowers, well elevated above the leaves, render it very showy.

P. Annette.—White, tinged with lilac, and the upper petals having a deep-red spot. The foliage is much curled, and has a powerful lemon scent. It is a profuse bloomer, an excellent bedding variety, and grows about a foot high.

P. grandiflorum.—A fancy variety, white ground, with large clouded blotch on upper petals, and a band of crimson across the lower ones. The flower is of good form, large as Statiiski, and profuse bloomer. An excellent bedding one. A foot high.

P. Unique, var. *lilacina.*—The purple Unique is now a great favourite, and this very neat *lilac* variety will be equally so. It is in all respects much like the former kind, except the colour of the flowers. Both varieties ought to be in every flower-garden, as well as in every greenhouse, where they prove to be valuable for blooming freely during winter and the early part of spring.

P. lucidum.—Leaves a rich green, with a lighter centre, and very glossy. The plant grows about a foot high, blooms very profusely, rising well above the leaves. The petals are narrow, but being of a rich bright red they produce a fine show.

P. peltatum (*Pink Ivy-leaved*).—This is a very pretty variety, blooming very freely, and the flowers stand well above the foliage, of a beautiful pink colour, and are borne in profusion. Most of our readers know the old white-flowered Ivy-leaved; that kind is often grown in beds; but there is too large a proportion of leaves to the flowers, that it has not a nice effect. The foliage of the Pink is not *so large*, and the flowers are *more abundant.* It is a good variety for a bed. There is a light purple variety, too, which is a good one for bedding, of similar habit to the Pink, and well worth possessing.

P. Lady Mary Fox.—This is one of the general class of Pelargoniums. Flowers about two inches across, good shape, scarlet, and the upper petals have a dark spot on each. It blooms freely, is of medium growth, and a good bedding variety.

P. Sidonia.—By some this pretty variety is placed among the Fancies. The flowers are two inches across, flesh-coloured, shaded with bright pink. The upper petals have a dark spot, and the lower ones a rosy-red spot. It is of medium growth, blooms very freely, and a pretty bedding variety.

P. Moore's Victory.—This old variety has always been admired. The foliage is very prettily divided and curled. The flowers are about three parts of an inch across, of the richest deep scarlet colour, with a black spot on each of the upper petals. If grown in a bed where the soil is not very rich, it blooms freely; but in all cases it is a very neat handsome variety, well worth possessing.

P. Nimrod.—The plant is the most like the old *Daveyanum* of any we have seen. The flowers are borne very freely, each blossom about two inches across, of a rich scarlet crimson. A good bedding variety.

P. Nutans: The Nodding.—The plant grows from six to nine inches high, and the shoots have a decumbent tendency, rendering it very suitable to grow at the side of a vase or raised bed, &c. The flowers are an inch across, of a rich red, and the upper petals have a black spot on each.

P. coccinea.—The plant grows compact, a foot high, and blooms very freely, of a rich scarlet colour, each blossom being an inch across. It is an excellent bedding variety.

P. Lady Rivers.—A fancy variety; grows about a foot high, and blooms very freely. Each flower is two inches across, having a white ground, and a broad band of rosy-pink across the upper petals. An excellent bedding variety.

P. Cerise Unique (of the so-called Scarlet Geranium Class).—We noticed it this last month, and, in addition, have to recommend it as an excellent bedding one. The leaves have a light-green centre, with a brown horse-shoe mark, edged off with dark green. The flowers are large, fine form, of a rich cherry-scarlet colour. Of medium growth.

P. Judy.—Large flowers, fine form, pretty salmon-scarlet, producing a beautiful effect in a bed. *Punch*, with its magnificent trusses, of large fine-formed rich scarlet flowers, is an excellent bedding one. *Tom Thumb* and *Compactum*: we need say no more than each are excellent.

P. Flower of the Day.—This popular variety, with its green leaves, edged broadly with white, is a tolerably free bloomer; the flowers of good size and form, of a salmon-scarlet colour; does very well in a small bed. The plants should be of good size before turning out, and then they do not run into too much foliage, the old wood pushing less vigorous shoots, but a freer supply of flowers. Messrs. Lee having specimens of a large as well as small size out in the open ground, we perceive the above result.

P. Golden Chain and *Golden Chain superbum.*—These are handsome in a bed, even without a flower. Like the *Flower of the Day*, the plants should be of good size before turning out, so that they have one or two years' old wood; and the shoots from such not being too vigorous, bloom more freely than young robust ones.

Fuchsias.—There is a large bed of mixed *light* and *dark* flowered varieties; but thus arranged they have not a good effect: each *section* ought to be in separate beds, or grown as single bushes, remote from each other, in which manner they display themselves the best.

In the greenhouse the following superior varieties were in bloom:—

F. Diadem de Flora.—Tube an inch and half long, white. Sepals flesh colour, with a green tip. Corolla rosy-crimson, which is well shown, as the sepals reflex back, so that when the blossom is expanded it is three inches and a-half across. A fine variety.

F. Prince Arthur (Nicol's).—Tube an inch and a-half long, stout, white. Sepals white, reflexing well. Corolla large, of a rich rosy-crimson. A very superior variety; ought to be one of every collection.

F. General Oudinot.—Tube long, rose colour. Sepals rose, tipped with green. Corolla large, a rich crimson-red. When the flower is fully expanded it is four inches across. Very showy.

F. Don Giovanni.—Tube and sepals of a *bright scarlet* colour, the latter reflexing well, and fully exhibits the *rich violet-coloured* corolla.

F. splendens.—The flower is only of medium size. Tube and sepals of a very bright scarlet, the sepals reflexing very much, fully exhibiting its fine blue corolla. It is exceedingly pretty.

F. serratifolia multiflora.—The flowers are smaller sized than the original species, but of similar colours, viz., tube rosy-pink, with green sepals; corolla orange. It is a *free bloomer*, and well worth growing, either in-doors or the open bed.

F. striata (Storey's).—The flower is of medium size; tube and sepals red; corolla crimson, beautifully striped with rich purple. The sepals reflexing well, the striped corolla is fully exhibited.

F. flavescens.—The flower is of good size; tube and sepals pale yellow; corolla scarlet. The contrast is striking and handsome. A free bloomer.

Salpiglossis.—Numbers of plants in pots in the greenhouse and pit-frames were in nice bloom, such as new yellow; lilac, veined with black; bronze, beautifully veined with gold; white, veined with black; white, with yellow veins; blue, with light veins. This pretty tribe well merits a place as summer ornaments for the greenhouse.

Nerium spectabilis de Neuilly.—The plant blooms profusely. The flowers are single, of a pretty peach colour.

N. formosum.—A profuse bloomer. The flowers are single, white, and the centre streaked with red.

N. Joan of Arc.—Flowers single, white, with a pale sulphur centre.

N. lutescens.—Single; petals narrow, pale yellow.

Fuchsia corymbiflora alba.—Very large plants of this pretty variety are in fine bloom. The tube and sepals white, with rich crimson corolla. Some of the racemes were about two feet long. It requires to be grown in-doors, and where it can have partial shade, in order to have the tube and sepals pure white. With such attention it will bloom true.

Bouvardia leiantha.—The flowers are of a *bright* scarlet, very distinct from any other of the genus

Microsperma Bartonoides.—A pretty new hardy annual, whose flowers very much resemble those of the old dwarf-spreading St. John's Wort of the gardens. Each flower is three inches across, bright yellow, and, with its numerous thread-like filaments, has a very interesting appearance. The plant spreads freely, and blooms abundantly.

Brachycoma iberidifolia.—The blue, lilac, and white flowering varieties were in beautiful bloom in the greenhouse. Their pretty Aster-like flowers, in such profusion, render them very ornamental. Now is the time (September) to sow seed in pots, and raise young plants before winter, in order to bloom fine next season.

Justicia carnea.—This is one of the prettiest plants in the stove and greenhouse. Its fine heads of beautiful flesh-coloured flowers are very ornamental, bushy plants having a dozen or more heads of bloom. It is a charming plant, blooming, too, almost all the year.

Sanvatillia procumbens.—This low-spreading annual is employed as an edging, a foot broad, round some circular beds of other flowers. It blooms very freely; each blossom an inch and a-half across, yellow, with a black disk. It is very neat and pretty, growing a few inches high, and blooms all the summer. It would do well around a raised bed, or to hang over the edge of a vase.

Impatiens pulcherrimus.—The flowers are of a similar form to Balsamita latifolia, an inch and a-half across, lilac, with a rosy-purple centre. The plant is more robust than this species; grows two to three feet high. It is in stove; but no doubt would do equally well in summer in the greenhouse. It is very pretty.

Œnothera prostrata.—This is a pretty plant for an edging to a bed of other flowers. It grows four to six inches high, and blooms very freely; its pretty yellow flowers in abundance render it very showy. It blooms all the summer season.]

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

ANNUAL flower seeds, as Clarkia, Collinsia, Schizanthus, Ten-week Stock, &c., now sown in small pots, well drained, and kept in a cool frame, or a spare corner in a cool greenhouse, through winter, will be suitable for turning out in the open borders at the end of March or in April. Such plants bloom early and fine; they are early ornaments for the flower garden; and as they decline, the spring-sown plants are coming into bloom. Seeds of many kinds, *now sown* in the *open border*, generally survive the winter, and bloom vigorously early the next season. *Carnations:* the layers should be taken off, severing them *at a joint* as near the root as possible. Only a few of the bottom leaves should be trimmed off to admit the compost to settle closely around the stem, and that no leaves may rot inside the soil, and be likely to damage the main stem. The compost in which to pot them must not be rich, or the plants will be likely to grow too vigorous, and become what florists term too gross. Equal portions of year-old turfy loam and leaf-mould, with a small proportion of sand mixed therein, is rich enough, and of a dryish texture, and the plants keep healthy in it if otherwise duly attended to. They must have a liberal drainage: over the broken pot, &c., spread a portion of moss or turfy loam, in order to prevent the compost settling amongst the bits of pots, and to allow a free passage for the water draining away. The compost must not be sifted, but chopped, and in its rough state. In potting, place two layers in each pot. When potted, put them in a cool frame for about ten days, keeping the lights closed, and shaded from mid-day sun; this contributes to an immediate striking root afresh: afterwards they may be fully exposed in a sheltered spot, having a thick floor of coal-ashes or boards to place the pots upon, in order to prevent worms entering. ***Pinks:*** beds of them may still be made, and the earlier the more successful: dig into the bed four inches in thickness of old manure; do it a week or so before planting, and plant as early in the month as you can. *Pansies:* beds of them should be made for next spring bloom. Pot some of all the best kinds in small pots, to be placed in a cool frame during winter. If the sowing of the seeds of biennials, as Scabious, Canterbury Bell, Brompton and Queen Stocks, &c., has been neglected, they should be attended to as early as possible. *Verbenas:* runners should be potted in small pots, a third filled with potsherds, and the rest with good loamy soil, placing them in a close cool frame for ten days, shading from mid-day sun; after which gradually expose them to open air. Attention to them should be *immediate*. *Bulbs*, as Hyacinths, &c., are now to be had, and the sooner they are potted the more vigorous they will bloom. *Chinese Primroses* should be encouraged for winter blooming. If mildew appears on any plants, dust them with sulphur immediately. *Camellias* may be grafted; the operation may be performed with the greatest success by pursuing the method the French call "*graffe en placage*," which is merely inserting that portion of wood that includes a bud and leaf cut longitudinally into a corresponding cleft in the stock. The grafted subjects should be plunged in bottom heat, and kept covered for at least a month. *Roses* may still be budded. Nail to the wall young shoots of Banksian Roses. Cut clean away those not wanted. Prepare beds of *Sweet Violets*. Roses for forcing too. Collect seeds as they ripen.

IN THE GREENHOUSE, COLD FRAME, &c.

Cuttings of nearly all plants may be successfully struck yet; but the earlier they are put in the better. Towards the end of the month take in the tenderer greenhouse plants: but the house should be white-washed, &c., previously if required. Repot *Chrysanthemums*, if the pots they are in be full of roots; give manure water once a-week. See on culture the articles in early numbers of this year. *Cinerarias*: pot off singly the offsets, also seedlings. Seed may still be sown, but as early as possible, in order to have the plants strong enough to pot off before winter. Cuttings of bedding plants should be put in directly. Pot off singly rooted cuttings of *Pelargoniums*, &c. Cuttings of *Tea Roses*, *China*, *Bourbon*, &c., soon strike root at this period. See last number for remarks upon insertion, &c.

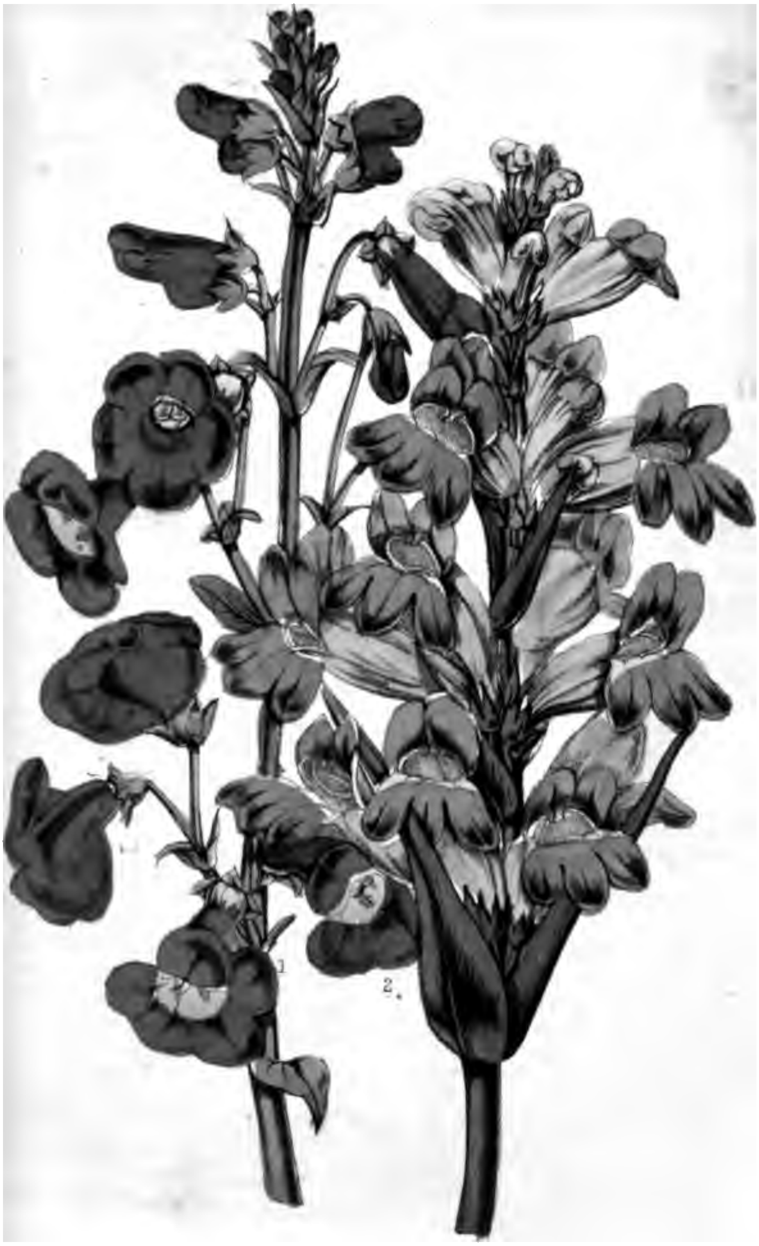
A SIMPLE METHOD OF DRYING AND PRESERVING SPECIMENS OF FLOWERS.

BY MR. R. [illegible], OF PINE-APPLE-PLACE NURSERY, LONDON.

(*Continued from page* 203.)

To do this it is necessary to have some common writing-paper cut into half-sheets, a large camel-hair pencil with the handle pointed, and the following mixture:—One ounce of gum-tragacanth, one ounce of gum-arabic, and one ounce of brown sugar. Mix the gum-tragacanth, and then add the other ingredients, adding water till it is of the consistence of cream. If a small piece of camphor is added, it will keep the mixture from fermenting, and prevent insects from destroying the specimens.

Having got a sufficient number of specimens belonging to the same order, whether of the natural or *Linnæan* system (I greatly prefer the natural arrangement), to fill a page without crowding, lay one on its face, and dipping the hair-pencil in the prepared mixture, spread it over the whole of the back part of the specimen, then lay it on half a sheet of the writing-paper, and press it down. Place the other specimens in a similar manner till the page is properly filled; then cover it with a sheet of paper, and place it under the press for a few minutes, in order to keep the specimens down till the gum mixture is dry. After being taken out of the press, write at the top of the page the name of the order, and the situation (country) where discovered, as well as the date when found, under each respective specimen.



Pentstemons
1. Wrightii. 2. cyananthus.

OCTOBER, 1851.

ILLUSTRATIONS.

1. PENTSTEMON WRIGHTII.

THIS very beautiful, strikingly distinct Pentstemon was discovered by Dr. Wright in Texas, in South America. It is a perennial, growing freely, the flower-stems rising two to three feet high, and blooms profusely. Seeds of it were sent to the Royal Gardens of Kew, and plants have been in bloom all the summer in the open ground or pots, and are still flowering. The branching panicled spikes of flowers are from one to two feet long. The leaves are of a very pale colour. The plant appears to thrive in the open ground; but it is not yet proved at Kew whether it will endure the severity of winter without injury. Probably it may require a slight protection, similar to the Chelone barbatum, or Pentstemon speciosa. It will be easily increased, and a few plants may be preserved in a pit or frame, or some other sheltered place. It is a most charming species, and ought to be grown in *every* flower-garden.

2. PENTSTEMON CYANANTHUS.

This, too, is a beautiful flowering perennial plant, which was introduced into this country by Messrs. Lucombe, Pince, and Co., of Exeter. It is a native of the neighbourhood of Platte River, in the Rocky Mountains, in South America. Mr. Burke obtained seeds from thence; and Messrs. Lucombe, Pince, and Co. thus became possessed of the lovely species. The flower-stems rise from half a-yard to two feet high, and bloom in profusion. It is about as hardy as the *P. Wrightii*, and well merits a situation in every flower-garden. Some of the Pentstemons are liable to be affected by mildew. The best remedy is to dust the plants over and under the leaves with sulphur. Both the species we now figure flourish in compost of light loam, sandy peat, and leaf-mould, in equal proportions, with a sprinkling of bits of charcoal.

The *Pentstemon* family are very interesting, and many of the kinds are exceedingly gay; the whole are valuable plants for a flower-garden. An entire collection is well worth possessing, and may be procured at a low price.

NOTES ON NEW OR RARE PLANTS.

Acacia bombycina.—A very handsome species from New Holland. It forms a small bush, the leaves an inch and half long, and half an inch broad. The flowers are in balls, half an inch through, of a bright rich yellow colour. Like numerous other beautiful species, this deserves a place in every greenhouse or conservatory.

Aphellandra cristata.—This is a fine hothouse plant. The flowers are produced in large terminal branching panicled heads, of a brilliant orange-scarlet. Each blossom is two to three inches long, in form like those of the long tubed-shaped Justicias. It is in fine bloom at Messrs. Lee's, of Hammersmith.

Calceolaria alba.—This very handsome half-shrubby species is but little known. It forms a pretty bush, about a foot to eighteen inches high. The foliage is very neat, narrow, about one-eighth of an inch broad, and from one to two inches long, produced in abundance, so as to clothe the branches. The flowers are borne in *large terminal panicles*, each blossom being nearly half an inch through, and *globe-shaped*. The plant is a profuse bloomer, and whether grown in pots or beds is a valuable acquisition for the greenhouse or flower-garden. We have found it succeed admirably in both instances.

Calceolaria Vivid.—This is a shrubby variety, very beautiful for bedding. It is of medium growth, and the flowers are borne in large broad heads. Each blossom is nearly an inch long, crimson, with a light yellow cap (as the florists term it). It is remarkably pretty, and admirably suited for a bed. If purchased now, a stock might be struck this season for planting out next spring.

C. Sulphurea-splendida.—This is a half-shrubby variety, of medium growth, but a most profuse bloomer. The flowers are of a deep sulphur, good size, and in large panicled heads.

C. Harlequin.—A shrubby variety, of medium growth, but a profuse bloomer. The flowers are of a smallish size. The upper side of a deep orange; the lower side dark crimson, and singularly pretty.

Campanula pumila plena.—Most of our readers know the little blue species of Campanula; the one we now notice has *double blossoms*, and is very pretty either in beds, edging, vases, or pots. We find it thrive alike in each situation.

Cantua buxifolia (*C. dependens of Veitch*).—See Figure in our Number for last June. This is one of the most beautiful flowering plants which has of late years been introduced into this country. It will form one of the handsomest ornaments, either grown singly in pots or beds, and will constitute one of the most charming bedding plants. Young plants should be obtained now, in order to be grown into good-sized well-ripened specimens for turning out next spring. The plant grows freely, and is easily preserved through winter in a cool frame or in the greenhouse. Every garden, greenhouse, and room-window ought to be adorned with it.

Ceanothus cuneatus.—An evergreen shrubby plant from California. The flowers are produced in umbels, white; it does not blossom as freely as our older imported species, C. uzureus and others.

Collinsea multicolor (Many-coloured).—Messrs. Veitch, of Exeter, have introduced this beautiful *annual* from California. Like *C. bicolor*, it grows from one foot to half a yard high, and produces its gay flowers in vast profusion. It is much handsomer than the latter-named species, on account of the rich purple tint of its long floral leaves, and the pretty marking of the flowers. The middle boat-shaped lobe of the lower lip is a rich crimson, lower lip lilac, and upper lip lilac with a white spot in the middle, and beautifully spotted with blood colour. Each blossom is an inch across. It merits a place in every flower-garden. (Figured in *Paxton's Flower Garden.*)

Chrysobactron Hookerii.—An Asphodelus-looking plant, which is a native of New Zealand, where it grows in large clumps in boggy places, and is said to cover the plain with a sheet of yellow when in bloom. The flower scape rises two to three feet high, bearing at the top a loose raceme (several inches long) of golden-yellow flowers. Each blossom (six petals) is about three parts of an inch across. It has been kept in winter in a cool frame in the Royal Gardens of Kew, where it has recently bloomed. (Figured in *Bot. Mag.*, 4602.)

Dendrobium clavatum.—Thomas Denne, Esq., of Hythe, in Kent, recently obtained this very handsome flowering species from Assam, and it bloomed in the stove the present summer. The flowers are borne in close heads of five in each, and each blossom is about two inches across when expanded, of a rich orange-yellow colour, with a double blotch of deep brown. It is a valuable acquisition, and deserves a place in every collection.

Dendrobium albosanguineum.—A stove Orchidæa, which has been introduced into this country by Messrs. Veitch. Their collector, Mr. Lobb, found it in open forests near the Atran River, in Moulmein. The flowers are produced in terminal spikes, of five or six in each raceme. A separate blossom is about three inches across. The ground is a creamy-white, with two large blood-coloured spots at the base of the petals. The plant is stout, erect growing, and showy when in bloom. (Figured in *Paxton's Flower Garden.*)

Erysimum Arkansanum.—This new species is in the Horticultural Society's garden, and it is stated to grow three feet high, and to be more beautiful than the fine orange-flowered E. Peroffskianum.

Fuchsia Expansion.—Tube and petals white, and corolla a bright rose colour, thick and stout, and an abundant bloomer.

F. globosa magnifica.—Sepals very broad and of a rich crimson; corolla purple, shaded with rose up the middle. Each blossom is an inch and a-half across. A very superb variety and free bloomer; it ought to be in every collection.

F. VOLTIGEUR.—Tube and sepals crimson, well reflexed; corolla dark purple. Very superior flower.

F. CLAPTON HERO.—Tube and sepals crimson; corolla *very dark*. A large and very superb flower.

F. MAZEPPA.—Tube rosy-orange; sepals bronzy-orange; corolla vermilion-scarlet. Strikingly handsome, and a free bloomer.

F. RESPLENDANT.—Tube and sepals a shining crimson; tube short, and sepals well reflexed; corolla rosy-purple. Very distinct and pretty.

F. SEDONIA.—Tube and sepals blush-white, with deep green tips; corolla rosy-purple. A very handsome variety.

F. MADAME SONTAG.—Tube, short, waxy white; sepals waxy white, much reflexed, fully exposing the corolla, which is a rosy-crimson, with a white bottom. A pretty and stout flower.

GAILLARDIA PICTA TRICOLOR.—This is a very beautiful variety. The flowers are about two inches and a-half across. The centre of anthers yellow, surrounded with rosy crimson, which is also surrounded with a circle of white, and the ends of the petals are of a bright sulphur. Very handsome. In Mr. Van Houtte's collection.

GREVILLEA LAVENDULACEA.—A neat greenhouse shrub, introduced by Messrs. Henderson, of the Pine-apple Nursery, Edgeware-road, from the Swan River colony. The flowers are borne in terminal tufts, each half an inch long, with long filaments, of a pretty rose colour. (Figured in *Mag. of Bot.*)

HELCIA SANGUINOLENTA.—An orchid epiphyte, discovered by Hartweg in Peru, and is in the orchid stove at the Horticultural Society's Garden at Chiswick. It is of small stature, but each blossom is nearly two inches across, of a greenish colour, banded across with brown, and the lip white, with crimson veins. Neat and pretty.

LYSIMACHIA CANDIDA.—We have several pretty *yellow*-flowered species in our flower-gardens; but this is a *white*-flowered one, obtained from China. It is a profuse bloomer, the flower-stems rising a foot high, and the flowers are borne in close terminal racemes. It merits a place in every flower-garden, and may probably prove an useful bedding plant.

NYMPHÆA ELEGANS.—This very pretty Water Lily was discovered by Dr. Wright in New Mexico, who sent seeds to the Royal Gardens of Kew, where it has bloomed the present summer in what is known as the Victoria Water-Lily House. Each flower is about four inches across, having twelve to fourteen petals, of a yellowish-white, tinged towards the points with purplish-blue, and a centre of rich yellow stamens. (Figured in *Bot. Mag.*, 4604.)

PEDICULARIS MOLLIS.—An herbaceous hardy perennial, which grows about a foot high, the stems terminating in spikes of flowers, of a deep purple colour. Each flower is about half an inch long, and the open mouth about the same across. This species was discovered by Dr. Hooker on the high mountains of Sikkim Himalaya, and has bloomed this season in the Royal Gardens of Kew. (Figured in *Bot. Mag.*, 4599.)

PELARGONIUM MOUNTAIN OF LIGHT.—This is another pretty variety of what are commonly termed "Variegated-leaved Geraniums." It is somewhat in the style of *Flower of the Day*, but superior to it. The leaves have a leaf-shaped pale green mark in the centre, surrounded with a broad *white* belt. The surface of the leaf is much, "but very prettily," crumpled or "waved." The leaves of the Flower of the Day fall back from the centre to the edge; but in the present variety they are of better substance, and spread out firmly. The flowers are of a deep scarlet, each blossom about an inch across. It blooms freely. Messrs. Lee, of Hammersmith Nursery, have the entire stock.

P. BEAUTY OF THE PARTERRE.—The leaves are green, with a lighter centre, surrounded with a horse-shoe of darker colour. It is a profuse bloomer, of dwarf habit. The flowers are of a bright salmon colour. It is a charming variety, either for pots or bedding.

P. BRIDAL BOUQUET.—The leaves have a *leaf-mark* of deep green, with a broad *white* belt. The plant is a free bloomer. The flowers are of a deep crimson-scarlet. It is a beautiful variety. Mr. Henderson, of Wellington Nursery, St. John's Wood, raised this and the two following varieties:—

P. PEACH BLOSSOM.—The leaves are large, and marked like *Flower of the Day*. The flowers are of a salmon colour, good form. It is a free bloomer.

P. GOLDEN ADMIRATION.—Centre of leaves pale green, with a broad belt of a *yellowish-cream* colour. It is a free bloomer, and the large trusses of bright scarlet flowers stand up well above the foliage. A fine variety.

PHILADELPHUS SATSUMI.—This pretty Syringa is a native of Japan, and is a hardy deciduous compact bushy shrub. The flowers are produced in pairs at the ends of the shoots; they are white, and each about an inch and a-half across. It is an acquisition for the shrubbery, and may be had at the London nurseries.

PHYSOCHLAINA GRANDIFLORA.—Lieut. Strachey collected this plant on the plains of Thibet, at an elevation of fifteen thousand feet above the level of the sea. It is like an Hyoscyamus, a hardy herbaceous perennial, the flower-stalks terminating in a large panicle of flowers. Each blossom, bell-shaped, is an inch long, and nearly as much across the mouth, of a yellow-green colour. (Figured in *Bot. Mag.*, 4600.)

SALVIA GESNERÆFLORA.—Several of the periodicals have recently contained this fine flowering species. We notice this in order again to record that it is one of the finest autumn and winter ornaments for the greenhouse. The brilliant light scarlet flowers, borne in profusion, in large terminal panicles, are very showy, and render it deserving a place wherever it can be grown.

Salvia speciosa.—This species is of medium habit, and blooms very freely. The flowers are of the richest scarlet, and exceedingly pretty. It blooms during the autumn and winter months, and is the more valuable on that account. It deserves to be in every greenhouse.

Sarcopodium Lobbii, var. Henshalli.—A stove orchid epiphyte. It was imported from Java by Messrs. Rollisson, of Tooting Nursery. The flower-stems are each about six inches high, bearing a solitary flower, which is three inches across. All the blossom is of a yellowish-buff, with the sepals streaked with brownish-purple. (Figured in *Mag. of Bot.*)

Spirea laxiflora.—A dwarfish bushy shrub from Nepal, quite hardy, and the flowers are produced in terminal spreading panicled heads, white. Its dwarf habit and free-flowering character render it valuable for the front of a border of shrubs.

At Messrs. Veitch's.

Saxe-Gothæ conspicua.—This beautiful evergreen tree, from the mountains of Patagonia, has somewhat the appearance of the Yew. It has been planted in the open ground for several years, and proves as hardy as the Araucaria.

Fitz Roya Patagonica.—This fine coniferous tree has also somewhat the appearance of the Yew, and having drooping branches.

Libbrocedras tetragonus.—It has the aspect of the Arbor Vitæ.

Fagus obliqua.—An evergreen Beech from Patagonia.

Castanea chrysophylla.—An evergreen Chestnut from California.

Laurus aromaticus.—An evergreen from Chili, whose leaves are more fragrant than those of the Bay-tree.

Myrtus Ugni.—A Myrtle from Chili, bearing a large purple fruit.

Desfontaines spinosa.—An evergreen resembling a Holly-bush, and produces beautiful *scarlet Honeysuckle*-like flowers.

Berberis Darwinii.—This we recently figured. It forms a handsome bush, and its shining evergreen foliage is exceedingly neat.

Escallonia Pæppigeana.—Bearing white flowers. A native of Peru.

Tropæolum speciosum.—A number of these pretty scarlet flowering plants are planted and trained to a *north*-aspected wall, and which bloom very freely, and have a handsome appearance. It endures the winter on the north side of the wall without injury, but will not thrive when exposed to the sun.—*Gardeners' Chronicle.*

THE PROGRESS OF THE PELARGONIUM.

(*Continued from page* 222.)

BY ORION.

It was about this period when Mr. Rendle, of Plymouth, first introduced a new and very superior method of advertising and "sending out" new Pelargoniums, and which eventually quite superseded the old way, described at page 149; this was purchasing the raiser's best seedlings, and advertising them immediately after the termination of the exhibition season, with prices moderate in comparison with those of previous years; and this plan was found to answer so well, that very soon it became general, and it remained only for Mr. Beck to show that *one guinea* was a sufficient sum for any variety, unless it possessed a peculiar and novel character, and then *one guinea and a-half* was his outside limit. Mr. Lyne, of Cornwall, made a very successful beginning in 1843, by raising (or first advertising) his justly celebrated Duke of Cornwall, priced at three guineas, which very speedily became the "flower of the day." It is a noble flower, with a fine large trussing habit, and, in my opinion, only now gives place to the same grower's Forget ne not, a flower of after-years' production. *Lord Ebrington and *Princess Royal, each at two guineas, and Sunrise at three guineas, all contributed to prove that Mr. Lyne had realized great success, though in the first year only of his "coming out." Mr. Foster's *star* this year was *Sir Robert Peel, a nice stout flower, in colour similar to Conservative, but perhaps not so deep. Favorite was a light pink variety, much given to "sporting;" these two were each priced at three guineas, and the following of Mr. Foster's raising were each two guineas: Luna, *Nestor (a large flower), Rosetta superba, and Sapphire. Mr. Garth's best flowers were; Unit, Queen Philippa, each two guineas; Wizard and *Constellation at three guineas. None of these call for any particular notice. Mr. Gaines had *Amulet, Duchess of Sutherland, and Orange Perfection, each at three guineas; Lady Sale, Prince of Wales, and Princess Royal, at two guineas. A good white variety, Lumsden's Sarah, also appeared; but this, like all the whites hitherto out, possessed the invariable plum-coloured veins. Bassett's Glory of the West, sent out at two guineas, was much admired, as was Blackford's Thunderer at the same price; the latter was a large coarse-veined pink flower. Queen of Bourbons, a novel pink flower, long thrown out, with Belle of Ware, Comte d'Orsay, Imperialis, and some others, each at two guineas, were, perhaps, worthy of notice in their day, but must be passed over in the present hasty glance. Though a few good flowers appeared, this was by no means a successful season compared with some others, and, therefore, let another year's productions be reviewed. Eighteen hundred and forty-four saw the *first batch* of Mr. Beck's flowers, and his productions from the first assumed that importance they have so long and greatly deserved. The names were Black Prince, British Queen, *Cleopatra, *Leonora, *Evening Star, Meteor, *Susanna, and others, all sent out by Messrs. Lucombe and Pince, of Exeter, at moderate prices, varying from seven shillings and sixpence to one guinea: they were mostly dark flowers, of quite a different vein to any that had previously appeared. The same nurserymen also sent out a flower of some notoriety, Pluto (raised by Mr. Thurtell), also at one guinea. This most likely was the parent of all the dark flowers hereafter raised with such *velvety blotches* as shown in Mount Etna, Crusader, &c., and was then a good acquisition, in point of colour chiefly. Three large coarse flowers, all very similar, were sent out this year—*IVANHOE, DRUID, and FEARLESS: size must have been their only recommendation. Mr. Cock, "the eminent cultivator," of Chiswick, also had his CYRUS SUPERB, ELISE SAUVAGE, and MAID OF HONOUR, moderately priced at one guinea. Mr. Foster's flowers were CONSTELLATION, CONFLAGRATION (very bright coloured, though small, and perhaps the parent of the PRINCE OF ORANGE style of flower), and HYBLA, also a bright flower (much in the way of ERECTUM): the above were priced at two guineas, and the following at one guinea: PULCHELLUM, a nice purple, *LADY VILLIERS, *LORD CHANCELLOR, and THE PET. A large coarse flower, BAINBRIDGE'S BEGUM, deserves notice, but was too much veined for the price advertised, viz., two guineas. Mr. Gaines's flowers were ELEGANS NOVA, three guineas, of very loose habit; COTHERSTONE, EGBERT a small dark crimson, both at two guineas; KING OF BEAUTIES, three guineas; and PRINCESS ALICE, one guinea, a dull white, with the "everlasting" *plum*-coloured spots. Mr. Garth did not produce much this year: his QUEEN PHILIPPA, at two guineas, BYRON and PLANTAGENET, each at one guinea, and BLACK DWARF, at half a guinea, were but of small notoriety. ACKBAR, sent out at three guineas, became a good exhibition flower; but the raiser is unknown. Lyne's CELESTIAL was a flower of much novelty; and the same raiser's PRINCESS ALICE was also a selling flower; they were both advertised at two guineas. Mr. Catleugh sent some flowers out this year under his name; they were MULBERRY, VICTORIA, and TIPULA, each at one guinea. A good rich dark flower, named MOGUL, also first appeared, and divided public favours with PLUTO, which it much resembles; it had this difference, the price was treble, being three guineas, though the quality was not superior. It will be found that after this, with few exceptions, prices became more uniform; indeed, a large sale was commanded at a guinea or even a guinea and a-half. Few amateurs, or even nurserymen, would support the old-fashioned system of high prices; so it eventually became quite general.

We have now arrived at an important epoch in our progress. The appearance of a new amateur with an entirely fresh stock gave quite an impulse to the Pelargonium trade; and that he was successful, both as an exhibitor and seedling raiser, may be seen on glancing over the reports of the grand exhibitions.

NOTE.—Those marked (*) received prizes at Chiswick, &c., as seedlings.

PROPAGATING SHRUBBY CALCEOLARIAS.

BY C. M., BERKS.

SHRUBBY Calceolarias, which, without due care, often damp-off in cold pits or frames during winter months, may be easily raised and preserved by putting in cuttings in October in garden-mould, mixed with a good supply of road or river sand, and covering them with a hand-glass. For a few weeks they will require to be shaded from mid-day sun, and protection when frost is severe; but the glass may be kept closed all the winter, and without other care they will make strong plants for edding out the following season. This simple plan having answered well, I am induced to give it publicity, hoping also to encourage her connoisseurs thus to publish the result of successful experiments.

ADAPTATION OF PELARGONIUMS FOR TRAINING AGAINST A WALL, &c.

WHAT are commonly termed "Scarlet Geraniums" are now so greatly nproved in quantity and quality as to have become one of the most opular flowering plants for adorning the conservatory, greenhouse, welling-house window, and flower-garden. So very generally are ey cultivated, and so strikingly ornamental for the greater part of the ar, that we may exclaim, "What should we do if bereft of them?" he vacuum occasioned could not be equally well filled up. During e last and present year we have paid particular attention to this arming tribe of plants, by taking notes of all improved varieties that me under our notice, and have recorded them in the successive Numers of the FLORICULTURAL CABINET. By the improvements effected e now possess varieties of very diminutive growth, progressing onwards ccessively to gigantic stature, all profuse in bloom, and in colours, arying from white up to the richest hues of scarlets and crimson, many f them, too, diffusing an agreeable perfume. General observation ffords proof of their adaptation as ornaments for the habitations above ated. Some varieties, however, are better suited to particular puroses than others are, some of which we shall particularize.

Four years back we had the designing of grounds, flower-gardens, c., connected with a new mansion, which had a broad stone terrace long the south, east, and west fronts. The front wall of the terrace as five feet high, and the face of it was formed into recesses of six feet ong, between each of which there was a projecting portion extending ix inches beyond the recess front of the wall, and two feet broad. uch was the continuous arrangement from end to end. A border for owering plants was formed along the front of the terrace, three feet ide and two feet deep, there being six inches of rough materials, as rick-bats, stones, &c., laid over the bottom to compose a drainage, and he rest filled up with good turfy loam, which had been prepared in eaps a year previous.

In order to have plants trained against the wall, a neat wire frameork was fixed; and early in April as many Pelargoniums, of the carlet flowering section, were planted in every recess as was required o fully cover the space during the season. The varieties planted were he strong growing, so as to reach the height of the wall in due course; nd in arrangement the adjoining kinds were as different in colours as re could obtain, selecting those which produced the best contrast. The projecting portions between the recesses were planted with the nost showy and abundant flowering Petunias, Maurandias, Heliotroiums, Double Nasturtiums, Tropæolum tricolorum, pentaphyllum, nd canariense; Passiflora cærulea, Luphospermum maculatum and Cliftonii; Thunbergias, white, yellow, and buff, each with dark eye;

Clematis Sieboldii and azurea grandifloru, &c. This kind of planting had been determined two years previously; and *strong* plants had been provided of nearly all required. When in full bloom the whole, and every particular portion, had a most handsome appearance. The various plants against the projections produced a pretty contrast and variety, and gave relief from any sameness in colour. The border was additionally filled with the best of herbaceous plants, greenhouse plants that bloomed freely out of pots, and the prettiest annuals. Care was taken not to have any robust plants, but neat, showy, and fragrant. The following season the whole was occupied in a similar manner, with some improvements in new flowers; and though we have not seen it since that time, we doubt not but additional improvements yearly occur.

Vases filled with suitable plants were placed along the coping stone of the terrace wall, that being eight inches higher than the interior pavement. Each projection in the face of the wall formed part of a pillar, and upon each of these pillars a vase was placed. Of course some cost and trouble was incurred in these matters; but the beauty and fragrance very amply repaid in enjoyment for those particulars.

What was accomplished in such an extended scale may in principle be realized in proportion in a lesser one. Where there is not a wall to train against, a wood fence may be constructed to answer every purpose, and at a small expense too. We have seen several of such erected for the sole purpose of training Chrysanthemums to; and in order to protect the flowers from frost, a thin canvas cover was fixed on a roller, and the plants were covered every evening. Such a provision might be given to the Geranium wall, and thus prolong the period of blooming.

We have not a list of the Geraniums which were trained against the terrace wall, but the following we can strongly recommend for such purpose; they are vigorous growers and free bloomers, and comprise all the shades of colours, as well as much variety in the marking of the leaves:—

PRINCESS ALICE (Conway's).—The leaves are green, without marking. The flowers are a vermilion colour, with a striking white eye. Flower of good form.

FIRE QUEEN (Barker's).—Leaves green. Flowers rich scarlet, full size, fine form, and in very large trusses.

CHERRY CHEEK.—Leaves green. Flowers of a rosy-peach colour, good form, and in fine heads. Very pretty.

IVERY'S SCARLET.—Leaves deep green, with a *very dark* horse-shoe marking. Flowers rich scarlet, and of good form.

VIVID.—Leaves green. Flowers light scarlet, large and showy.

VOLUNTEER.—Leaves green. Flowers bright scarlet, with a small white eye. Pretty.

GLOBE COMPACTUM.—Leaves green, with horse-shoe mark. Flowers in large trusses, standing erect beyond the foliage. Good form.

COMPACTUM SUPERB.—Leaves green, horse-shoe mark. Flowers light scarlet, large trusses.

LADY RACHAEL RUSSELL.—Leaves green. Flowers rich scarlet, with white eye, good form. Pretty.

Captain Darley.—Leaves green, with slight horse-shoe mark. Flowers of a pretty salmon-scarlet, good form, and fine trusses.

Brompton Hero.—Leaves green. Flowers of a deep scarlet-red.

Commander-in-Chief. — Flowers orange-scarlet, fine form, and large trusses. Very pretty.

Royalist.—Leaves when young have a horse-shoe mark, which disappears as the leaves advance, and they become wholly green. Flowers large, a brilliant scarlet, and white eye, in fine trusses.

Shrubland superb.—Leaves green. Flowers rich scarlet, good form, in fine trusses.

Pink Nosegay.—Leaves green. Flowers of a striking pink colour; the blossoms are not of superb form, but very distinctly pretty.

Cerise-Unique.—Leaves green, with a lighter centre. Flowers of a pretty cherry colour, good form.

Flower of the Day.—Centre of leaves light green, with a creamy-white belt. Flowers light scarlet. Very distinct and pretty.

Pink-flowered Ivy-leaf.—Leaves a rich green. Flowers a pretty pink, not of superb form, but neat.

White-flowered Ivy-leaf.—Leaves green. Flowers white, with slight crimson marks.

Purple-flowered Unique.—Leaves very pretty, of a rich green. Flowers of a beautiful rich purple. Handsome.

Lilac-flowered Unique.—The only difference from the above is the colour of its flowers.

Oriflamme.—Leaves green. Flowers a brilliant scarlet, with a very distinct white eye, and fine form.

Gem of Scarlets.—Leaves green, with a dark horse-shoe mark. Flowers deep scarlet, with small white eye; compact trusses of bloom.

All the above are well adapted for training, and can be procured at a very reasonable cost. They are valuable, too, for the conservatory or greenhouse.

The border in front of a terrace, or other wall, fence, &c., might be planted with the various dwarf-growing Geraniums, which now comprise so many distinct coloured flowers and foliage. Placed in the most distinct contrast with the colours of those trained, they would have a pretty appearance; and some being of very tiny growth, would form a very pretty edging where desirable.

Also, instead of planting a different class of plants against the projecting parts, as Maurandias, &c., Geraniums of strikingly different colours from those growing on either side could be appropriated with effect, and would produce a more gay appearance.

BRIEF REMARKS.

The Seedling Pelargonium Exhibition.—In drawing your attention to the result of the recent exhibition at the Regent's Park, I am sorry to say a *true* and *correct* description of the flowers exhibited there has not yet appeared; and I think your readers would be much obliged if you gave a short description of those which "were not placed," as well as those which had prizes awarded them. It seems that our old friend Beck is pronounced beaten at last, for out of the seven prizes awarded, only one of his flowers was considered deserving, and that only a sixth. But in my opinion Beck is as good as any of them now; his seedlings do not shine *as such*; they are most admired when on the exhibition tables *as dozens*; and it would gratify me and many others were any spirited cultivator to exhibit, say six of Beck's best with six of Hoyle's best, six of Foster's, or six of any other raisers, to decide which are the best, "take them all in all;" or it might be done by having a sweepstakes for the best six, as was done with Dahlias a year or two since.—*An Admirer of Mr. Beck, but not of the Florist.*

Meetings of Societies.—National Floricultural, *August* 7.—Mr. C. P. Lochner in the chair. A first class certificate was awarded to a variegated scarlet Pelargonium, named Mountain of Light, from Messrs. Lee, of Hammersmith. Several plants of it were shown, all dwarf and bushy. The foliage is beautifully variegated, the truss good, and the flowers bright scarlet. Mr. Costar's Picotee, called Christabel, received a Certificate. Mr. Holland had a promising heavy purple variety, named Countess of Wilton. Mr. Edwards sent collections of Carnations, Picotees, and Dahlias. Messrs. Henderson, Phlox Mayii, the tall purple Lobelia, called Aurora, and the pretty Gloxinia tricolor. Hollyhocks in spikes, Carnations, Picotees, and Dahlias came from Mr. Bragg, of Slough; a Hollyhock, called Purple Perfection, from Mr. Laing, of Twickenham; and a nice exhibition of Marygolds from Mr. Barnes. These constituted the principal subjects exhibited on this occasion.

National Carnation and Picotee Society, *August* 4.—The first meeting of this new society took place at Slough. There was great competition, and the blooms were large and well coloured. *Carnations* (*Amateurs*): 1. Mr. M. May, Sonning. 2. Mr. J. Edwards, Holloway. 3. Mr. Newhall, Woolwich.—*Picotees:* 1. Rev. A. Matthews, Weston-on-the-Green. 2. Mr. M. May. 3. Mr. Lochner, Paddington.—*Carnations* (*Open Classes*): 1. Mr. Turner, Slough. 2. Mr. Bragg, Slough. 3. Mr. Willmer, Sunbury.—*Picotees:* 1. Mr. C. Turner. 2. Mr. Bragg. 3. Rev. A. Matthews.—*Yellow-ground Picotees:* 1. Mr. Bragg. 2. Mr. Turner. 3. Mr. Hoyle, Reading. 4. Mr. Willmer. Several Seedlings received Certificates. We have thought it better to give the names of the most conspicuous flowers exhibited in each class, than to give the entire lists; and in doing this we have included some new varieties of Carnations. In Scarlet Bizarre, Admiral Curzon, Lord Lewisham, Lord Rancliffe, and Bolingbroke were in good order. Crimson Bizarres were very numerous and good. Lord Milton, Duncan, Jenny Lind, Owen Glendower, Black Diamond, Puxley's Queen, and Queen of Trumps were in excellent condition, as were also Puxley's Favourite and General Monk, the latter having the best white in this class, and otherwise good. In Pink Bizarres, May's Falconbridge stands high, being large and well marked. The old but favourite flower, Puxley's Prince Albert, was very fine, and had but few equals. Sarah Payne, Twyford Perfection, and Henry Kirke White were also shown. In Purple Flakes, Beauty of Woodhouse, Premier, Squire Trow, Poins, and Perfection were the favourites.

Scarlet Flakes were represented by Cradley Pet, Simpson's Queen, Puxley's Standard, and Africanus. Of Rose Flakes, Puxley's Princess Royal, Flora's Garland, May's Ariel, Poor Tom, Lorenzo, Antonia, nd Wood's Haidee were the best.—*Picotees:* These advance towards erfection much faster than Carnations do. Foremost in the heavy ed-edged class was Mrs. Norman, a full-sized variety, of first-rate properties, fully maintaining the opinion given of it last season; Prince of Wales, King James, Hogarth, and two of Mr. Fellowes's seedlings were ood; also an intermediate variety, between red and rose. Costar's hristabel is a neat pleasing flower, of good properties, without the ghtest bar. Light red: Youell's Gem, Duchess of Sutherland, Miss olbeck, and Dodwell's Mary; the latter is good in size, and very enly marked. Heavy purple: Dodwell's Alfred, Lord Nelson, ortia, Lady H. Moore, Prince Arthur, Viola, and Duke of Rutland, e latter a fine constant flower, were in the best possible order. In ght-edged purple, Matthew's seedling was the best; it is a superb wer. In this numerous class the following were good: Ophelia, anymede, Willoughby, Circe, Jupiter, Juliet, and Fellowes's seedng '51. Heavy rose and scarlet, the most attractive class of all, was presented by Venus, Green's Queen, Princess Royal, Marris's Victoria egina, a bright fine flower, and Marris's Grace Darling, a flower milar to Princess Royal, but wider in the petal; Unexpected is a edium-sized neat variety; and Jeannette has a fine petal, but is rather in. Light-edged rose: Mrs. Barnard, as usual, stood at the head of his class; and Countess Howe is a pleasing bright variety.—The meetng for 1852 will be held, we believe, at Norwich.

DERBY CARNATION AND PICOTEE SHOW, HELD IN THE TOWN HALL, *August* 6.—This society is celebrated for showing the best kinds, and he finest blooms of any in the country. The following are the particulars of the present exhibition:—

Carnations.—The best Six Flowers in each Class.—Scarlet Biarres: 1. Admiral Curzon, Mr. Dodwell. 2. Ditto, ditto. 3. Ditto, ditto. 4. Ditto, ditto. 5. Ditto, Mr. Buswell. 6. Ditto, Mr. Dodwell.

Crimson Bizarres: 1. Lord Milton, Mr. Dodwell. 2. Duncan, ditto. 3. Queen Victoria, ditto. 4. Ditto, ditto. 5. Owen Glenower, ditto. 6. Duncan, Mr. Adams.

Pink and Purple Bizarres: 1. Princess, Mr. Dodwell. 2. Ditto, ditto. 3. Twyford Perfection, ditto. 4. Lady of the Lake, ditto. 5. Seedling, ditto. 6. Sarah Payne, Mr. Adams.

Purple Flakes: 1. Earl Spencer, Mr. Dodwell. 2. Squire Meynell, Mr. Buswell. 3. Premier, Mr. Dodwell. 4. Ditto, ditto. 5. Beauty of Woodhouse, ditto. 6. Premier, ditto.

Scarlet Flakes: 1. Firebrand, Mr. Dodwell. 2. Ditto, ditto. 3. Hero of Middlesex, ditto. 4. Firebrand, ditto. 5. Ditto, ditto. 6. Africanus, Mr. Adams.

Rose Flakes: 1. Lady Ely, Mr. Dodwell. 2. Ariel, ditto. 3. Lovely Ann, Mr. Adams. 4. Lorenzo, Mr. Dodwell. 5. Unknown, ditto. 6. Lorenzo, ditto.

Picotees.—The Best Six Flowers in each Class.—Heavy-edged Red: 1. Prince of Wales, Mr. Dodwell. 2. Elizabeth (Robinson), ditto. 3. Ditto, ditto. 4. Ditto, ditto. 5. Prince of Wales, M Parkinson. 6. Lady Dartmouth, Mr. Dodwell.

Light-edged Red: 1. Gem, Mr. Dodwell. 2. Mary, ditto. 3. Ditt ditto. 4. Seedling (Mrs. Wood), Mr. Merryweather. 5. Ditto (70 Mr. Dodwell. 6. Gem, ditto.

Heavy-edged Purple: 1. Alfred (Dodwell), Mr. Dodwell. 2. Ditt ditto. 3. Ditto, ditto. 4. Duke of Rutland (Hollyoake), ditto. Alfred (Dodwell), ditto. 6. Duke of Rutland (Hollyoake), ditto.

Light-edged Purple: 1. Juliet, Mr. Dodwell. 2. Seedling (Lad Franklin), Mr. Merryweather. 3. Enchantress, Mr. Dodwell. 4 Lorina, Mr. Bayley. 5. Delicata, Mr. Dodwell. 6. Ditto, ditto.

Heavy-edged Rose: 1. Princess Royal, Mr. Buswell. 2. Queen Mr. Dodwell. 3. Venus, ditto. 4. Miss Rosa, ditto. 5. Venus ditto. 6. Queen, Mr. Bayley.

Light-edged Rose: 1. Mrs. Barnard, Mr. Dodwell. 2. Ditto, M Buswell. 3. Ditto, Mr. Dodwell. 4. Ditto, ditto. 5. Ditto, Mr Bayley. 6. Sophia, Mr. Buswell.

Besides the above, there were five Prizes given for the best twelve Carnations of any class, and the best six also. For Picotees, too, there were five Prizes for the best twelve, and the best six of any class. These collections contained superb flowers of all the best kinds. The following were very fine:—

Carnations.—Scarlet Bizarres: Admiral Curzon, True Briton, Broughton's Sir R. Peel, Elliott's Duke of Sutherland, and Lord Rancliffe.

Crimson Bizarres: Lord Milton, Duncan, Owen Glendower, Gladiator, Dodwell's Othello, Puxley's Jenny Lind, and General Monk, most beautiful.

Pink and Purple Bizarres: Sarah Payne, Princess, Lady of the Lake, and Twyford Perfection. This is a pretty class of flowers.

Purple Flakes: Squire Trow, Squire Meynell, Premier, Beauty of Woodhouse, and Lord Byron.

Rose Flakes: Flora's Garland, Lady Ely, Ariel, Lorenzo, May's King John (a first-rate seedling), Lovely Ann, and Madame Sontag, a most superb flower in all respects.

Scarlet Flakes: Justice Shallow, Hero of Middlesex, Lydia, Cradley Pet, and William the Fourth.

Picotees.—Scarlet or Rose-edged: Headley's Venus, Marris's Victoria Regina (a superb kind), Marris's Grace Darling, Miss Rosa, Princess Royal, Green's Queen Victoria, and Mrs. Barnard: this was very fine.

Purple-edged: In heavy edges Dodwell's Alfred was pre-eminent; Hollyoake's Duke of Rutland, very superb, which in a full centre surpasses Alfred. In light edges May's Ophelia is especially beautiful in all respects; also May's Juliet is a superb flower.

Red edges: Heavy edge, May's Sebastian, a fine variety; Marris's Prince of Wales, very fine; Lady Dartmouth, very pretty; and Robinson's Elizabeth, very large and strikingly showy; Fellow's Julia Romeo, a fine flower, a seedling not yet sent out.

Some other superb varieties of Carnations and Picotees were fine, but at that particular day were not in prime condition. Our readers will, however, see what varieties may be selected for exhibiting; and it is with a view to assist in this matter we insert the above particulars.

Horticultural Society, *September* 2.—Messrs. Lane, of Great Berkhampstead, produced two small imported Stanhopeas, and an example of Warczewicz's Achimenes Margarettæ, a new kind, with just ufficient flowers on it to show what a fine thing it might become under ood cultivation. The blossoms are pure white, and approach in size ose of longiflora. Mr. E. G. Henderson, of the Wellington-road ursery, sent young plants of Æchmea fulgens and the new sort called Æ. miniata discolor; Gesnera zebrina, and an improved variety of it med splendens; Vriesia splendens, with a gay spike of scarlet bracts least a foot in length; Clitoria braziliensis; and the scarlet Isotoma flora. Mrs. Summersby, gardener to Major Martyn, had a plant of zalea fulgens scarcely an inch high, with three large flowers on it. his was obtained by taking off the flowering point from an old plant, d striking it; and it was stated that the blooms were larger and finer the cutting than on the parent. Mr. Fleming, gardener to the uke of Sutherland, at Trentham, communicated an old Queen Pineple, weighing seven pounds. It was an exceedingly handsome fruit, ut hardly sufficiently ripe. A Knightian Medal was awarded it. rom Mr. Turnbull, gardener to the Duke of Marlborough, at Blen-eim, came some Noblesse Peaches, one of which weighed very nearly leven ounces. They had, we believe, been ripened under glass. A ertificate of Merit was awarded them. Some Raspberries were furished by Messrs. Lane, of a sort known at Great Berkhampstead by he name of Victoria. The fruit shown was gathered from canes which were reported to have been in bearing from the beginning of the season until the present time.

Royal South London Floricultural, *September* 3.—The fifth nd last exhibition this season took place on this occasion, and was nothing behind its predecessors in attractiveness. The show of Dahlias was as usual immense in number. Collections of Cut Roses were produced in high character for freshness and fragrance. In Mr. Paul's group, which was first, were Therese Margot, Etendard de Marengo, Pius IX., Angeline Boccella, Comte de Montalivet, Julia de Fontanelle, Jean of Arc, Comte Bobrinsky, Ophrie, Chereau. Mr. Francis sent Cloth of Gold, Elise Sauvage, Princess de Modena, Leveson Gower, Augustine Mouchelet, Gonda, Maria de Beaux, Géant des Battailles, and Vicomtesse de Cazes. Hollyhocks, both in spikes and detached blooms, contributed largely to the general effect, and were greatly admired. Among the sorts were Aurantia, Rosy Queen, Rosamond, Elegans, Sulphurea perfecta, Spectabilis, Magnum Bonum, Delicata improved, Surprise, Coccinea, Rosea grandiflora, Bella Donna. Mr. C. Baron, Model of Perfection, Enchantress, Walden Gem, Noblissima, Sulphurea perfecta, Sir W. de Eresby, Standard of Perfection, Susannah, and Sir D. Widdeburn, the last four being Scotch varieties. — *Verbenas:* 1st. Macrantha, Defiance, Laura, St. Margarets, Surprise, Model of Perfection, Voltigeur, King, Heroine, Exquisita, Wonder, Vergrets, British Queen, Reine Hortense, Lady of the Lake, Figaro, Iphigene, Perfume, Aspasia, Minerva, Desdemona, Shylock, and Othello. Second dozen were St. Margaret, British Queen, Reine Hortense, White Perfection, Voltigeur, Lady of the Lake, Exquisite Enchantress, Ninon de l'Enclos, Laura, and Pochye.—*Dahlias:* Of private collections there were 5 twenty-fours, 17 twelves, 6 six fancies and 5 six new sorts. *Dealers:* 11 twenty-fours, and 5 twelve fancies To these must be added several for extra Prizes, together with many seedlings, three only of which, however, received Certificates, viz. Laura Lavington, Attraction, and Dr. Frampton. *Amateurs,* 24 1st Prize, J. Edwards, Esq., with Sir C. Napier, Whale's Elizabeth Summit of Perfection, Negro, Fearless, Mr. Palmer, Regina, Snowflake, Grenadier, Mr. Herbert, Duke of Cambridge, Duke of Wellington, Queen of Lilacs, John Edwards, Yellow Standard, Jullien, Thames Bank Hero, Earl of Clarendon, Cobden, Admiral, Miss Herbert, Roundhead, General Fauchier, and Baltic. 2nd, Mr. Weedon, Hillingdon with Beeswing, Mr. Edwards, Mr. Seldon, Earl of Clarendon, Coccinea Anticipation, Toison d'Or, Shylock, Magnificent, Bathonia, Scarlet Gem, Elizabeth, Roundhead, Richard Cobden, Duke of Cambridge Sir F. Bathurst, Admiral, Model, Seraph, Grenadier, Negro, Jullien and Psyche. 3rd, Mr. Hopkins, Brentford. 4th, Mr. White, Chelmsford. Twelve Blooms: 1st Prize, Mr. J. Robinson, Pimlico, with Queen of Lilacs, Mrs. Seldon, Thames Bank Hero, Lady St. Maur Earl of Clarendon, Mr. Seldon, Duke of Wellington, Cobden, Fearless Essex Triumph, Sir C. Napier, and Sir F. Bathurst. 2nd, Mr. Black gardener to E. Foster, Esq., Clewer, with Leda, Model, Barmaid Black Prince, Duke of Wellington, Queen of the East, Essex Triumph Mr. Seldon, Mrs. Seldon, Earl of Clarendon, Sir C. Napier, and Cobden. 3rd, Mr. James, Stoke Newington, with Earl of Clarendon Mrs. Bacon, Duke of Wellington, Negro, Mr. Seldon, Sylph, Sir F. Bathurst, Admiral, Summit of Perfection, Hon. Mrs. Ashley, Essex Purple, and Sir C. Napier. 4th, Mrs. Mosley, Maida-hill. 5th, Mr. Bennett, Dulwich. 6th, Mr. Allen, Shacklewell. 7th, Mr. Kirkpatrick, Camberwell. 8th, Mr. Harris. *Fancy Varieties,* six Blooms 1st Prize, Mr. Black, with Empereur de Maroc, Raphael, Princess Louisa, Jenny Lind, Mrs. Hansard, and Pretty Polly. 2nd, Mr. Edwards, with Mrs. Hansard, Rachael, Pretty Polly, Jenny Lind, Lady Grenville, and Elizabeth. 3rd, Mr. Pope, with Highland Chief, Triomphe de Magdeburgh, Jenny Lind, Mrs. Hansard, Reizende von Elsthal. *New Flowers:* 1st Prize, Mr. Black, with Model, Leda, Barmaid, Roundhead, Sir C. Napier, and Nepaulese Prince. 2nd, Mr. James, with Nil Desperandum, Napoleon, Jullien, Roundhead, Admiral Napier, and Nepaulese Prince. 3rd, Mr. Robinson, with Regina, Nil Desperandum, Roundhead, Sir C. Napier, Duke of Rothesay, and Nepaulese Prince. *Nurserymen,* 24 Varieties: 1st Prize, C. Turner, with Cobden, Barmaid, Model, El Dorado, Princess Radzivill, Beeswing, Queen of Lilacs, Mr. Seldon, Fearless, Thames Bank Hero, Magnificent, Black Prince, Earl of Clarendon, Gem, Nepaulese Prince, Duke of Cambridge, Sir C. Napier, Mr. Herbert, Duke of Wellington, Blanchfleur, Princess Louisa, Essex Triumph, Mrs. Seldon, and Sir F. Bathurst. 2nd, Mr. Keynes, with El Dorado, Queen of Lilacs, Duke of Wellington, Seraph, Magnificent, Mrs. Seldon, Earl of Clarendon, General Faucher, Sir F. Bathurst, Yellow Superb, Essex Triumph, Gem, Beeswing, Miss Chaplin, Fearless, Snowflake, Mr. Seldon, Nonpareil, Madame Gouberts, Mr. Herbert, Princess Radziville, Frederick Jerome, Sir Robert Peel, and Negro. 3rd, Mr. Barnes, with Magnificent, Princess Louisa, R. Cobden, Fearless, Grenadier, Earl of Clarendon, Ambassador, General Faucher, Mr. Seldon, Mr. Palmer, Fame, Miss Chaplin, Seraph, Yellow Superb, Negro, Duke of Wellington, Queen of the East, Summit of Perfection, George Glenny, Uranus, Mrs. Williams, Thames Bank Hero, Charles Turner, and Sir F. Bathurst. 4th, Mr. Bragg. 5th, Mr. Drummond. 6th, Mr. Legg. *Nurserymen*, twelve Fancies: 1st Prize, C. Turner, with Empereur de Maroc, Rachael, Elizabeth, Mrs. Willis, Pretty Polly, Mrs. Hansard, Lady Grenville, Jeannette, Mrs. Labouchere, Jenny Lind, Gasparino, and Floral Beauty. 2nd, Mr. Keynes, with Princess Charlotte, Comic, Lady Grenville, Conspicua, Mrs. Hansard, Madame Wachy, Striata perfecta, Empereur de Maroc, Rainbow, Admiration, Jenny Lind, and Flying Dutchman. In class showing, seedlings, the best Dahlia was Dr. Frampton (Rawlings); the best fancy, Laura Lavington (Keynes); the best Fuchsia, Nil Desperandum; the best Hollyhock, King of Roses (Bragg); the best Verbena, National; 2nd, Koh-i-noor; 3rd, Orlando.

GLADIOLUSES.—This lovely tribe of flowers are great favourites of mine; and I was much pleased to see the descriptive particulars of many new varieties in the last year's volume of your Magazine. This year, however, I have not observed any notice of other new ones; and being much pleased with a very select collection of well-grown beautiful varieties which were shown at the Horticultural Society's last exhibition, held in the Chiswick Gardens, I send the names and description of each, with a hope it may be of use to persons desirous of improving their collections of this beautiful flower:—

Rex Rubrorum, well-expanded dark crimson.
Princeps, large waxy blush, handsomely striped.
Spectabile, light rose, shaded pink.
Candida, blush, shaded rose.
Punctata, lilac, curiously spotted.
Pulcherrima, bright pink, white stripe.
Sir Robert Peel, lilac, with rose stripe.
Elegans, fine rose, with distinct white stripe.
Albus, French white, striped.
Conspicua, very rich salmon, novel.
Striata, warm pink, striped and shaded.

The above, I was informed, are early-blooming varieties, and the following are of the habit of G. ramosas, and have much larger and more brilliant colours; most of them are new hybrids:—

Insignis, a well-known deep rosy-crimson flower.
Robin Hood, rich rose, white stripe.
Fanny Elsler, fine rose, handsomely striped.
Rising Sun, glowing orange-scarlet.
Abd el Kader, very bright scarlet, white stripe.

Van Dam Issart, light pink, with a deep crimson stripe, very distinct.

Lord John Russell, scarlet, white and violet feathered.

Princess Sophia, light rose, crimson and white stripe.

Wilhelminus, deep crimson-scarlet.

Beeswing, orange.scarlet, white stripe.—*An Ardent Admirer.*

CHINESE PRIMROSES.—Plants that are to bloom through winter should not be allowed to flower in autumn, pinch off all that appear prior to the beginning of September. Guano water, given once or twice a-week, greatly improves the size of the blossoms, and the coloured ones become of much deeper hue. It is one of the most charming winter flowering plants.

CAPE JASMINE.—Will any of your correspendents be kind enough to inform me in what manner I ought to treat a plant of double Cape Jasmine, which I purchased in Covent-Garden Market a short time since, and which seems to require treatment it does not receive, as it has lost its leaves, and looks in a very mournful condition. The person of whom I bought it told me it would do in an ordinary sitting-room; but this I do not find to be the case.—*Flora.*

TO DESTROY THE WIREWORM.—A subscriber would be glad to know the best method of destroying the wireworm, which has made dreadful ravages among the Carnations in her garden.—[Several liquids will kill the wireworm on being poured upon them; but they would destroy the plant too if poured upon it. The wireworm is very fond of carrot, turnip, or oil-cake; and if slices of any of them or all be just buried under the soil around the plant, the insect will be found attached to or cased in the baits, and then are easily taken away and destroyed. The baits should be examined morning and evening, and again buried, &c. A short attention will soon extirpate the race.—EDITOR.]

FLEMING'S SALTING MACHINE.—Observing remarks in recent Numbers of your Magazine on the use of the above-named machine upon walks, I beg to state that I have had one in operation for the last month, and have found it of the greatest utility. It is a most admirable machine, and I am delighted with the satisfactory results upon about five acres of gravel roads and walks. The cost of keeping the above in a decent manner of cleanliness, per annum, has been upwards of thirty pounds; and I am confident that by using this machine, and salting as directed, I can keep the five acres of roads and walks in the *best possible condition, free from moss or weeds*, for less than ten pounds. I beg to recommend it to all concerned.—*A Midland County Nobleman's Gardener.*

ANEMONES.—An article on this handsome tribe of flowers was inserted in the volume of your Magazine for 1850, but nothing was said about the lovely single flowered, which are so interestingly beautiful as border flowers. By sowing seeds in pots in February, and turning them out entire as soon as strong enough into the borders, then a sowing in the borders where I intend them to bloom in April, June, and the end of August, I have a succession of bloom nine months out of the year. Those seeds sown in June are covered over by means of a tile; it keeps the soil damp till the plants are up, and yet admits a current of air to pass through. Their great variety in colours and continued succession of flowers very amply repay for the little attention required. I do not take up my tubers, but leave them in the ground from year to year. During winter some usually perish; but saving my own seed, I have only to scatter a little in the borders, &c., and I always secure a supply. As spring flowers, from March to May, none can equal them for ornament, especially when to be seen from a dwelling-room.—*Clericus.*

TECOMA JASMINOIDES.—This is one of the most beautiful flowering climbing plants; and seeing in a recent Number of the CABINET a correspondent complains she could not get this plant to bloom freely, and solicits information relative to its management, so as to succeed satisfactorily,—I, therefore, observe that, having several strong plants, I turned two into the open ground against a south-aspected wall in the spring of last year. The plants were well furnished with *spurred* shoots, which are obtained by pinching off the leads of side shoots; they are the productive flowering shoots the second season. Now my plants bloomed freely in 1850; but this year (1851) they began to bloom in May, and have continued to the present time, and are the admiration of all who have seen them.—*C. P. B.*

THE CLOTH OF GOLD ROSE.—I have seen several stands of Roses at some of the different exhibitions of the season, and I have also searched your reports of the same; but nowhere could I see or find mention of the above variety, to my thinking, the "Queen of Roses." How is this? Is there greater difficulty in its culture, or is there only a particular soil that suits it? Having heard of parties who have found difficulty in flowering it, I thought I would just furnish you with the history of a magnificent specimen of it growing in this neighbourhood. The second week in June I visited the gardens of T. B. Western, Esq., of Felix Hall, and was there shown by his gardener, Mr. Bowie, a tree of it covering ten feet of ground, upon which we counted one hundred and fifty blossoms then open and opening, some of them measuring four inches over, an inch and a-half in the cup, and beautifully perfect in shape; many of the blossoms, just opening, were the size of hens' eggs. Last week I saw the same tree, and counted eighty-six blooms then upon it, with the prospect of many more for the after-part of the season. It has made shoots of this year's wood from five to six feet in length; it is growing in a moderately heavy loam; but I learned that formerly there was an old asparagus bed near where this tree now stands, and I concluded that it was this that has made it what it is in four years, proving that it is richness of soil that it requires to make it successful; and I am sure, could rose-growers have seen this specimen in the perfection in which I saw it, instead of its being generally discarded from our lists, no one would think his collection complete without the Cloth of Gold.—*R. R. W., Kelvedon.* (*Gardeners' Chronicle.*)

WARDIAN GLASS CASES.—I should be very much obliged if you, or any of the subscribers to the FLORICULTURAL CABINET, would write some account of the proper management of plants in Ward's cases. I have lately had one given me, and am very anxious to make it useful to strike cuttings in; and I also wish to try and preserve plants in it during the winter. The zinc tray having no drainage at the bottom, the mould in it becomes extremely wet; and I (as well as two other ladies who have lately purchased Wardian cases) should be very glad if any of your correspondents would give a few *practical* hints or information as to the management of plants in them. I have a little book, published by Mr. Ward some years ago; but it gives very little information *to a gardener*. I want to know if they are always made without any escape for the rain, which will come in when they are placed in a garden in the summer; and also if they are placed in a balcony open to the south, how one is to avoid the mould becoming saturated with rain in the winter. Any hints will be most acceptable to me; and as I have taken in the FLORICULTURAL CABINET from the *very first* of its being issued, I shall hope to see some information in one of the Numbers very soon, as I always read them with great interest.—*Victiana.*

(We applied to N. B. Ward, Esq., for information, who very obligingly forwarded the following.—EDITOR.)

" To answer your correspondent's inquiries in full would require much more time than I can now possibly spare. I am about to publish a new edition of a little work 'On the Growth of Plants in Closed Cases,' in which it is my intention to satisfy, if possible, the gardener as well as the botanist. There are, however, one or two points in your correspondent's letter which I have much pleasure in attending to. She mentions the mould becoming too wet in consequence of the admission of rain, and the want of drainage. Both these causes are defects in the construction of the cases, which should in all cases be made sufficiently tight to prevent the ingress of water from without or its egress from within; and there should invariably be an escape for any superfluous water from the bottom of the case; and this is the more requisite, as, although there may not be too much moisture in the first instance, it is requisite sometimes to give a little additional water, or to pour lime-water through the mould to destroy slugs, &c. The other *essential points* are to imitate as closely as possible the natural conditions of the plants with respect to the amount of heat, light, moisture, and periods of rest which the plants may respectively require, and which are very variable in plants from different regions and localities. Much may be done in a small case by a little management. Thus—Cactuses and Ferns can be grown together, by intervention of a little arch in rock-work, built up in the centre of the case, where it is obvious that the plants in the top of the arch will have double the amount of light and half the quantity of water which the plants in the bottom obtain. A small case of this kind may be seen in the north transept of the Great Exhibition. I regret that time will not allow me to answer more fully at present.—*N. B. Ward. Clapham Rise.*"

NEW SEEDLING DAHLIAS.—The following have been shown at the recent meetings held in or around London, and received certificates or commendations from the judges:—

Dr. Frampton.—In the way of Princess Radziville, with superior roperties. It is a medium-sized flower, light ground, edged and ottled with lilac-purple. Well up in the centre, good petal and utline.

Laura Lavington.—A dark salmon-brown, with white tip; medium ize; good average form, and centre well up.

Triumphant.—A ruby-red, medium size, good outline and centre.

Miss Creed.—Pale yellow, with white tip. Very pretty.

Miss Ward.—Lemon-yellow, with white tip. Said to be an improvement on Mrs. Hansard.

Wonderful.—Amber, streaked with purplish-pink. Good form.

George Villiers.—Dark ruby, of good properties in outline, petal, and centre.

Morning Star.—Deep orange-scarlet; large.

Una.—A large white flower.

Phantom.—A bright orange and buff, well up, deep, and good outline.

Miss Matthews.—Scarlet, with white tip. Good in all particulars.

Sir F. Thesiger.—A good-formed lilac flower, of medium size.

Flora M'Ivor.—A rosy-purple, with white tip.

John Davis.—A good-formed crimson, after the style of Richard Cobden.

Sarah.—Mottled lake and white.

Malvinia.—Mottled purple and lake; large flower.

HELIOTROPIUM LEAVES AFFECTED WITH LARGE BLACK SPOTS.—I have several plants in the greenhouse, whose leaves are rendered most unsightly with large black blotches. If some reader will inform me of a remedy and preventative for the future I shall be greatly obliged.—*A Clergyman's Daughter.* [We have known this to arise from the under side of the leaves being affected with mildew. The remedy is, dust the under side with sulphur. The bite, too, of insects produces dark spots. And we have noticed in hot weather that, owing to the rugged surface of the leaves, water will lodge in the hollows where the surface is flat, and when watered over head during hot sun it becomes heated, and the parts are scalded. Water over head in the evening, or quite *early* in the morning.—EDITOR.]

ARTIFICIAL ROCK WORK.—Among the numerous natural embellishments which are so abundantly scattered over the face of this country, and the natural facilities afforded for beautifying the private pleasure ground of the wealthy proprietor, there are but few instances where these natural facilities have been advantageously turned to account in artificial decoration.

Rockwork may sometimes be placed in the proximity of glass structures, and even in flower-gardens, with good effect, when these are of a gothic or rustic character; but here the rockwork must have none of the savage wildness of nature about it, and consequently nothing of the impressive picturesqueness of natural rocks. It should be rendered conformable to the objects around it, and appearing to be placed there for the purpose of cultivating those plants that succeed best among rocks, or for showing the natural habits of plants that grow naturally among rocks, or those that produce a better effect when planted on them. In these cases the rocks should be more artistically and tastefully arranged. It should be clearly shown, by their arrangement and accompaniments, that no attempt is made to imitate Nature, but rather a proper place for displaying and cultivating the plants that are grown upon them.

Rockeries of this kind depend for their interest and beauty more on the disposition of the plants than on any influence possessed by themselves; and therefore they should never be allowed to become bare, otherwise they dwindle down to meaningless conceits. They ought also to be formed of choice materials, as specimens of rare minerals, metallic ores, rich conglomerates, stalagmites, fossils, scoria, fine specimens of crystallography and vitrification, forming a kind of cabinet, which excites the attention of the spectator, and affords interest and gratification to the more curious examiner, and tending also to divest the rockery of any incongruity which might arise from its being out of place.

It may likewise be observed, that rockeries should always be in detached groups, and, whether large or small, should never present straight lines or flat surfaces. The more irregular the arrangement, the more striking the effect produced. It should also be so situated as to be partly shaded and overhung by pendulous trees, to screen it from the glare of sunshine; it should always be rather cool, and, if possible, shut in by itself by shrubbery, and, if possible also, should be accompanied by a *jet d'eau* or basin of water, or both.

To attempt giving rules for the arrangement of rockeries is useless, as their forms entirely depend upon the taste of the builder; and in this kind of work, more than any other branch of ornamental gardening, will the taste of the builder be brought out; and here also will be perceived the difference between those who have studied from nature, and those who have no vivid conceptions of natural beauty. It may here be observed, however, that the whole design should be diversified in its outlines, in its heights, and in its general forms. No two parts should bear the slightest resemblance to each other, and the greater the irregularity, the more interesting the effect.—*Dowding's American Horticulturist.*

LEONOTIS LEONURUS (LION'S TAIL).—This is one of the *finest greenhouse plants grown*, and deserves to be in every one. I have had a plant in bloom the past summer for several months, which, with its noble spikes of splendid orange-scarlet flowers, formed a brilliant object. I had it in my collection since 1836; but with the usual treatment of greenhouse plants I could not bloom it. I resolved to adopt another method, and I therefore had a one-year old plant shifted into a pot a foot in diameter, in a rich loamy soil, not sifted, well drained; I placed it in a forcing pot heated by hot water, and having a brisk and moist temperature it grew rapidly; and having a free supply of water, absorbing much, it produced fifteen vigorous spikes of bloom, and when just expanding I had it removed to the greenhouse, where it continued to bloom till November. The plant can be procured at the nurseries for a trifling sum, and it deserves a place in every greenhouse collection.

IN THE FLOWER GARDEN.

HOLLYHOCKS.—*Now* make new plantations of these noble flowers. Auriculas and Polyanthuses, Carnations, Pinks, &c., should be placed in their winter quarters, in a dry, sunny, sheltered spot, but, at the same time, where a free circulation of air can be admitted on all proper occasions. The surface soil must be loosened, and a slight sprinkling of fresh compost be spread over it. Any plants out in the open beds, as Lobelias, &c., should be taken up and potted for winter preservation in pits, frames, &c. Chrysanthemums grown in the open ground, and required for blooming in-doors, should be taken up as entire as possible, and be potted with due care; they will bloom fine. All tender kinds of plants, as Scarlet Geraniums, Verbenas, in fact every kind requiring winter protection, should be housed *immediately;* it is bad policy to put off a single day longer. Already we have had strong frost, which has injured the tender things in some places. [Our Dahlias were most severely damaged by frost on September 1st and 2nd.—EDITOR.] All plants like light; place them as near to the glass as convenience will allow, the farthest off the worst. Tender Roses, grown out of doors, should have protection over the roots, &c., or be taken up and housed. Prepare the Tulip-bed.

DAHLIAS.—Let the crown of the roots be covered, heaping a few inches deep of soil around the stems. Beds of Pansies may be made. Shrubs of all kinds should be planted. Roses now planted SOON PUSH NEW ROOTS, and become well established before winter; the soil being somewhat warm, excites the roots immediately. Pansies may still be planted in beds; also Pinks.

SHRUBS, &c., FOR FORCING, FOR WINTER BLOOM.—Such as are to bloom early should be gradually prepared, potted immediately, if required, and by the middle of the month introduce such as are desired to bloom by Christmas into the house or pit. The kinds which are well deserving such attention are Roses, Honeysuckles, Jasmines, Azaleas, Kalmias, Persian Lilacs, Andromedas, Carnations, Pinks (of which Anne Boleyn is the best), Rhododendrons, Rhodora, Deutzias, Ribes, Spirea prunifolia, Mezereum, Gardenias, Cupheas, Heliotropes (the new blue is fine), Scarlet Pelargoniums, Cactus, Eranthemums, Justicias, Salvia, Gesnerias, Corræas, Chinese Primrose, Aconites, Mignonette, Primroses, Cinerarias, Stocks, Persian Iris, Crocus, Cyclamens, Sweet Violets, Hyacinths, Lily of the Valley, &c. Seeds of many annuals should now be sown in the border, and others in pots; such will bloom early next spring. Brachycoma, Schizanthus retusus and Hookerii, Rhodanthe, and Salpiglossis, seeds now sown, plants potted off when strong enough, will bloom vigorous next spring.

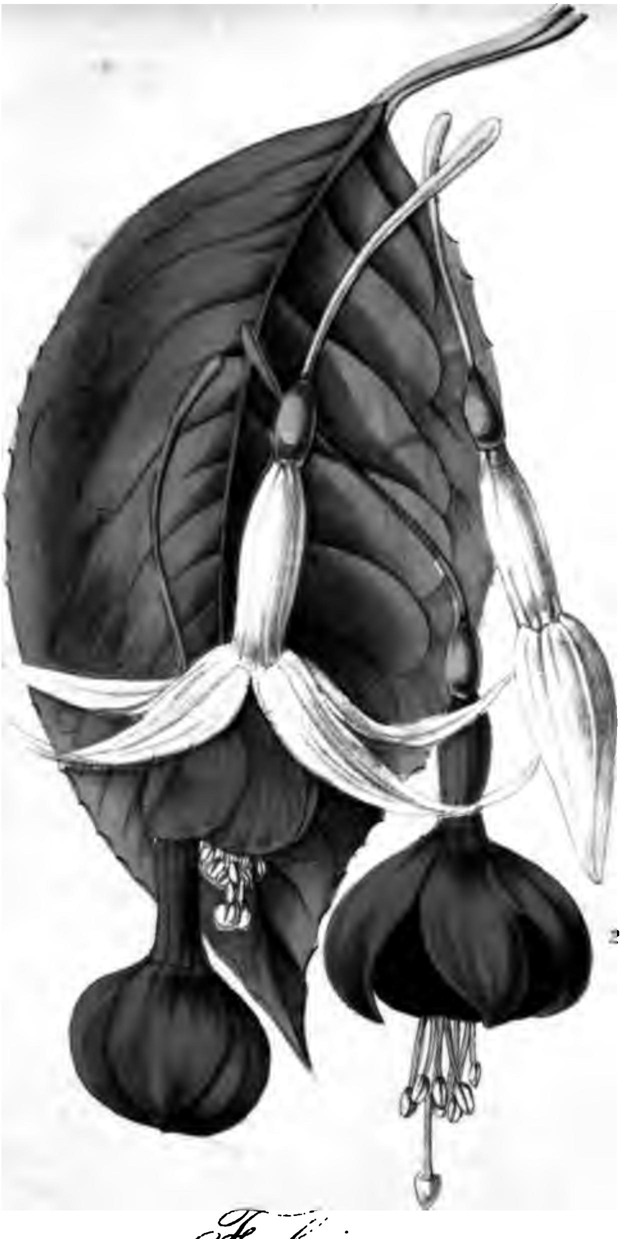
IN THE GREENHOUSE, STOVE, &c.

If the stock is not housed it ought to be done immediately, and much judicious attention is necessary in properly placing a mixed collection of plants. Care must be taken so that one plant may receive something like its proper treatment without interfering materially with the well-being of its neighbours; and whilst the tender ones must be placed in the best part for protection from cold wind, &c., as Polygalas, Pimeleas, Leschenaultias, Aphelexis, Boroneas, Gompholobioms, and Diosmas, are injured by being placed where there is a *current* of wind. Let each plant have all the space possible, and the robust large-leaved kinds, and the very slender delicate sorts, should be kept as separate as can be arranged, so as to allow a due circulation of air. Be careful that the pots, &c., be perfectly clean before arranged for their winter situation. Re-pot Cinerarias, &c. Let Camellias which are to bloom early be placed in a warmer situation, also any Chinese or Indian Azaleas, so that they may be gradually advancing. In watering the stock of plants, let it be done in the early part of the day, so that any excess may be dried up before evening, and damps be avoided, otherwise mouldiness will ensue. Thin away the flower-buds of Chrysanthemums; water occasionally with liquid manure. Calceolarias strike root freely; now pot off seedlings to bloom next season.

PELARGONIUMS.—The plants headed down some weeks back, now have pushed shoots an inch or two long; these should be thinned properly. The plants must be repotted in order to have the roots well established before winter. Shake off the soil, and shorten some of the long roots, so that young fibres be promoted, which is essential to the vigour of next bloom. Have a free drainage in the pots. If a compost, such as is recommended by Mr. Cock in a former Number, is not possessed, then take turfy loam well chopped up, with an equal portion of sandy peat and well-rotted leaf-mould, and half the quantity of well-rotted dung. Give air to the plants in the day time, and be careful not to give over-much water at the roots, for if saturated they will be injured. Young struck plants should have the tops pinched off to cause the production of side shoots, to render them bushy for next season. Repot some of the SCARLET GERANIUMS (so called) to bloom during the autumn and winter; they are charming ornaments. So with *the new Tree Carnations*, of which there are near twenty varieties.

VICTORIA REGIA.

WE again called at Mr. Weeks' Nursery to see this fine plant in the open-air bason. It was in most robust health, having nine large leaves, but which do not turn up at the edges, as is the case when grown in high temperature. There were, too, sixteen flowers, expanded or unexpanded. The one in bloom was fifteen inches across, being larger than any we have seen either at Kew or Syon House.



Fuchsias.

1. Prince Arthur. 2. Globosa Magnifica.

FLORICULTURAL CABINET

NOVEMBER, 1851.

ILLUSTRATIONS.

1. FUCHSIA PRINCE ARTHUR (Nicolls).
2. FUCHSIA GLOBOSA MAGNIFICA (Kimberley's).

FUCHSIA, so named in honour of a celebrated German botanist, Leonard Fuchs. The first plant of this genus, which was discovered in Chile, and introduced into England, was F. coccinea, in the year 1788. The pretty growth of the plant, and the graceful manner in which its elegant flowers were produced, contributed to render it, at that period, quite a wonder in the floral world, and plants were sold by the first Mr. James Lee, of Hammersmith Nursery, at twenty pounds each. It was then cultivated as a *stove* plant. Writing upon this valuable and beautiful flowering plant, the learned Mr. Martyn, then Professor of Botany at Cambridge, states, "The *scarlet Fuchsia* is a plant of very peculiar beauty, producing its charming rich pendant blossoms during most part of the year. The petals in the centre of the flower are especially deserving of notice, they somewhat resemble a small roll of the richest purple-coloured riband. It is a most elegant plant for the drawing-room or study."

In 1796 another species was discovered in Chile, and introduced into England, viz., F. lycioides (Box Thorn like). It is not so showy as its predecessor, but forms a neat shrub, the flowers being a bright rose-colour. It is scarce at the present day, but is a very pretty plant for the greenhouse, and deserves a place in every one.

It does not appear that any attempts were made to obtain hybrid seedlings from the above two species, and the next introductions were, after a lapse of twenty-seven years, viz., in 1823, F. gracilis and F. macrostemon, both obtained from Chile. The following year, 1824, F. arborescens, excorticata, and tenella, were added to the previous ones; they too were from Chile. The above kinds having been received, and some bearing seed freely, seedlings were raised, and in 1826 several beautiful varieties bloomed, and plants were eagerly sought after and purchased at high prices. This success induced numerous growers to commence raising seedlings, and each following season, from that time, improved varieties have come forth. The skill of hybridizers has succeeded in obtaining *large-sized* flowers, having *pure white* tube and sepals, with crimson, rose, blue, and lilac corolla. The *finest* of this section is the one we now figure, **Prince Arthur.** It grows freely, blooms abundantly, and its *large-sized* beautiful flowers have a striking appearance. It highly merits a place in every collection of Fuchsias.

The globe-flowered section is a very interesting one, and the variety we now figure, **Globosa magnifica**, is *far superior* to any other we have seen. The blossoms are *very large*, and when fully blown, the rich-coloured corolla is well exposed to view. The plant is of good strong habit and blooms very freely. It grows erect two or three feet high in one season, and is an admirable variety for a flower-bed, vase, or pot culture. It has a nice effect when this variety is grown in the middle portion of a bed, and then surrounded with dwarf-growing kinds, the contrast being very pretty. It merits a place in every collection.

NOTES ON NEW OR RARE PLANTS.

Aerides roseum.—A fine orchid, producing a raceme of rosy-pink flowers, about a foot long; leaves light-green, thick and fleshy, nine inches long. The specimen from which the figure was taken is in the splendid collection of Messrs. Loddiges. (Figured in *Paxton's Flower Garden*, plate 60.)

Browallia Jamesonii.—This plant (which we figured a short time back), although it is generally considered a shy bloomer, Hector Munro, Esq., of Druid's Stoke, near Bristol, has succeeded in flowering profusely in the greenhouse last June. In the summer season it grows freely against a south wall, but in winter it requires a warm greenhouse or moderate stove. (Figured in *Bot. Mag.*, 4605.)

Brownæa ariza.—A splendid stove-plant, is a native of the province of Bogota, in South America, from whence it was sent by Mr. Hartweg. It forms a tree of thirty to forty feet in height. The flowers are of a clear red, each about an inch and a half across, somewhat resembling in shape the *Pyrus Japonica;* they are produced in large drooping heads, which have a noble appearance. It requires a moist stove and is best propagated by the seeds. (Figured in *Paxton's Flower Garden*, plate 59.)

Camptosema rubicundum.—A fine stove-climber, with racemes of scarlet-red flowers, much like a Laburnum in shape; each flower is about an inch long, and the raceme about a foot in length. It is a native of South Brazil, from whence it was received at the Royal Botanic Gardens at Kew, where it has lately flowered in the Palm stove. It has been for a long time cultivated in Germany, under the name of Kennedya splendens. (Figured in *Bot. Mag.*, 4608.)

Delphinium Wheelerii.—A variety of *D. speciosum*, with a dense spike of bright-blue flowers, about a foot long, each flower an inch across. It was raised from seed saved from *D. speciosum*, by Mr. Wheeler, of Warminster; it will be an acquisition to the flower-garden. (Figured in *Mag. of Botany*.)

Epidendrum verrucosum.—This beautiful orchid was introduced from Mexico by Messrs. Loddiges, and a fine specimen of it flowered in July last, at the Royal Botanic Gardens at Kew; each flower is about four inches across, sepals and petals rosy-lilac, narrow. Lip of the same colour, with a yellow stripe up the centre. (Fig. in *Bot. Mag.*, 4606.)

Fuchsia, Great Western.—An hybrid, raised between *F. fulgens* and *F. Beauty of Leeds*. It is a pale-flowered one, of very large size. It was raised by Mr. Patterson, gardener to Baroness Wenman, of Thame Park.

F. Unique.—Tube and sepals a deep red. Corolla a deep violet-purple. Flower two and a-half inches long and shows the corolla well. Very fine.

F. Ignea.—Tube and sepals a bright red, and corolla a violet-purple. Flower two and a half inches long, showing the corolla well. Very fine.

F. Splendida.—Tube and sepals bright-red. Corolla bright-blue. Tube short. Reflexes well, an inch and a-half across. Very pretty.

F. Multiplex.—Tube and sepals bright-crimson, well reflexed. Corolla deep-purple and very double, resembling a double-violet.

The above have rich dark-coloured corollas, contrasting very distinctly with the tube and sepals. They exhibit the corolla to view much better than the F. Corallina, and merit a place in every collection.

F. serrattifolia multiflora.—The handsome flowering species most of our readers know, the present variety is a good acquisition. The flowers are a little less than the former, the tube two inches long, of a pretty rosy-lilac colour, and the corolla a light orange. The plant blooms much more freely than the original species. It merits a place in every collection. Both kinds bloom during autumn and winter, and form handsome ornaments for the greenhouse or sitting-room. They blossom, too, at any other part of the year, when potted and otherwise treated to promote it at various times.

Galeandra Devoniana.—One of the most rare and finest of the South American orchids. It was first discovered by Schomburgk, on the river Rio Negro, and lately Mr. Spruce met with it in the same place, and he forwarded a Ward's case to the Royal Botanic Gardens at Kew, which contained flowering specimens. It grows five to six feet high, and in patches from ten to twelve feet round. The flowers are produced in a tall stem, each blossom about four inches across; sepals and petals purple and green; lips nearly white, tipped and varied with purple. (Figured in *Bot. Mag.*, 4610.)

Grammanthes chloræflora.—A succulent annual, introduced from the Cape of Good Hope, growing almost three inches high and flowering very freely, each flower about half an inch across, star-shaped, deep blood colour, with bright yellow edges, and when the flower gets older it turns a deep blood colour. It requires to be sown in pots in the greenhouse, and at the latter end of May it may be turned out into the open borders. (Figured in *Bot. Mag.*, 4607.)

Hoya Cumingiana.—A stove-climbing plant, which also forms an erect bush, having short heart-shaped parchment-like leaves. The flowers are produced in rather small-sized umbels, of a greenish yellow, with a purple corona in the centre of each blossom. Messrs. Veitch introduced it to their establishment, where it has bloomed.

Ipomæa oblongata.—This species was discovered growing in a valley of the Buffalo River, near King William's Town, British Kaffraria, by Captain Rooper, who sent some of the roots to the Rev. Thomas Rooper, of Wick Hill, near Brighton. It is a half-hardy species, flowering best in a cool frame; it throws out long trailing stems and produces rosy-purple flowers, about three to four inches across, the roots are somewhat clubbed, in masses. It flowered with Mr. Rooper from May to September, and produced flowers at almost every leaf-joint. (Figured in *Mag. of Bot.*)

Ligustrum japonicum.—This is somewhat like the Chinese Privet, L. lucidum, but forms a more compact dwarfer bush, and the panicles of white flowers are rather thinner. It is a neat hardy evergreen shrub and an acquisition to our shrubberies. It was introduced by Dr. Siebold.

Lilium Loddigesianum.—Was received by the Horticultural Society from the Imperial Gardens, Nikita, in the Crimea, and also from Dr. Fischer, of St. Petersburg, under the name of *L. monadelphum*. It is a clear yellow with small spots, and in form it resembles the turncap Lilies. It is quite hardy and deserves cultivation. (Figured in *Paxton's Flower Garden*, plate 58.)

Lilium sinicum.—A greenhouse bulbous plant from China. The flower-stems rise about a foot high, each blossom is of the turncap shaped, two inches across, of a deep rich scarlet colour. They are produced in terminal heads of three blossoms. It is a very neat, dwarf, handsome plant, which was introduced by the Horticultural Society some time back, and recently by Standish and Noble, of Bagshot.

Narcissus.—Three seedling varieties, raised by E. Leeds, Esq., of Manchester; two varieties are whitish, with orange cups, and the third is pale yellow, with a long deep orange cup. (Figured in *Mag. Bot.*)

Pelargonium Grace Darling (Sheppard's).—Of the fancy class. Upper petals dark-clouded, edged with orange-scarlet. Lower ones orange-crimson. Very distinct and handsome.

P. Purple Standard (Foster's).—Upper petals of a dark-clouded velvet-purple, with a lighter margin. Lower ones a rich purple. This is a valuable acquisition, such a coloured variety being most desirable.

P. **SHYLOCK** (Foster's).—Upper petals black, edged with crimson. Lower ones a rich purple. A very striking flower.

RHODODENDRON CHAMPIONÆ.—A new species by Captain Champion, growing abundantly among the rocks, in a ravine at Fort Victoria, Hong Kong, who sent drawings of it to Sir W. J. Hooker. It is a shrub growing about seven feet high, leaves dark-green above and rusty colour beneath; flowers are of a beautiful bright flesh colour and white shaded. It will, no doubt, be an acquisition. Captain Champion, in his botanical excursions, also discovered the following:—*Azalea indica var. phœnicea,* common in the ravines near Hong Kong; it flowers early in the spring, and in March it is most beautiful. *A. squamata* is still more common, it produces a few flowers easily in winter, and when the fogs and humid atmosphere set in, about February and March, they burst into luxuriant bloom; the masses of lilac flowers at a distance look well, but the shrub being destitute of leaves, does not look so well on near approach. *A. myrtifolia,* a shrub growing four to five feet high, the leaves bright green, flowers pure white, campanulate when in bud, but when expanded one and a half inches across, with the three lower segments spotted with dark violet. *Enkyanthus reticulatus,* a handsome shrub, when the branches are detached from the plant the blossoms continue fresh for a very long period placed in water. It is much used in China for ornamenting the dwelling-houses.

SAXE-GOTHÆA CONSPICUA.—A new hardy evergreen coniferous tree, introduced by Messrs. Veitch and Son, who received it from their collector, Mr. Lobb. It was discovered growing on the mountains of Patagonia, forming a fine tree about thirty feet in height; it has been growing out in the open air at Exeter four years without having any shelter.

SIPHOCAMPYLUS AMÆNUS.—A native of Central America, from whence it was received amongst a collection of orchidea sent by M. Ghiesbrecht to the gardens of the King of the Belgians at Lacken, and has been sent to Messrs. Knight and Perry by Monsieur Louis V. Houtte, of Ghent. It bloomed in November last at the Exotic Nursery, Chelsea. It is a half-shrubby stove plant, about one foot high; flowers produced in a spike, rich scarlet-red, distinct and handsome species. (Figured in *Mag. Bot.*)

SPIRÆA CALLOSA, introduced from the north of China, by Messrs. Standish and Noble; flowers bright rose, produced in branched cymes; very pretty.

Plants now in bloom at the Royal Gardens of Kew.

GEORGIANA CERVANTES.—This new Dahlia is in bloom in the open flower bed. It forms a *tree-like branching plant,* five feet high, and its branches extend as much across. The blossoms are single, four inches across, of a deep-orange colour. Although the plant has not been thinned of any of its branches, it does not, like the Dahlia in general, grow into confusion when left unpruned, but its growth is that of a small *tree-like* plant properly balanced with branches.

Beotia Schrebere.—This is a fine border plant, apparently annual, growing six feet high, with numerous branches, and each shoot terminating with a rich orange-coloured flower, about three inches across, very similar in appearance to a single orange-coloured Marigold. These are produced numerously, and the branching head being four feet across, it has a very ornamental appearance, and is a valuable acquisition to the autumnal flowers of the garden.

Aster novæ Anglia.—This is one of the prettiest, its profusion of silk-like purple blossoms producing a nice appearance. The **A. novæ Anglia rosea** is still more beautiful, similar in form, but of a fine rose colour. They merit a place in every flower-garden. We have a descriptive list of the *best* kinds, which we shall insert in our next Number. These gay "autumn ornaments" are not grown equal to their merits, as well as some of the Solidagos, Rudbeckias, &c. A description of which will also be given, to assist our readers to a selection of such desirable ornaments.

In the Greenhouse.

Salvia bicolor.—A stiff close-growing neat bush, three feet high. The leaves are small, and the flowers are borne in large branching, terminal panicles; they are of a sky-blue colour, the lower broad lip having a large tip of white.

Roellia ciliata.—Its small heath-like foliage, and the profusion of large flowers, render it very ornamental. Each blossom is somewhat like in form to the blue spring Gentian, but about one-third the size, of a light-blue, having a black ring around the inside of the flower, near its margin. When properly grown it is very beautiful, and deserves to be in every greenhouse.

Begonia maritima.—This handsome species, of dwarfish growth (two feet high), with its numerous large, rich pink blossoms, is exceedingly ornamental, and likely to be so during the entire winter months.

Indigofera juncea, Rush-leaved.—It is a stiff-branching upright-growing plant, three feet high. The flowers are pea-shaped, one-third of an inch across, produced numerously in branching spikes, of a pretty rosy-lilac colour, and have a pretty appearance. It bears pruning-in, and can be bloomed freely any size desired.

Muraltia stipulacea.—This genus was separated from the well-known **Polygala.** The plant grows erect, two or three feet, branching, small, stiff, heath-like foliage. The flowers are pea-formed, small, bright-purple, with a white keel, and produced numerously in long spikes. Very neat and pretty.

Baurea rubioides.—A neat-growing plant, having small oblong leaves, and blooms freely. Each blossom, of eight petals, which nearly fill up a circle an inch across, are of a pretty light-pink colour.

Rondeletia speciosa major.—Its rich red blossoms with a golden eye, produced in terminal cymous heads, are very ornamental. Each blossom is half an inch across. It merits a place in every greenhouse or stove.

Crowea saligna.—A neat-growing, small willow-like leaved shrub. The flowers have each four petals, and the blossom about an inch and a-half across, of a pretty lilac-pink colour.

Malva triloba.—This neat-growing shrubby Mallow flowers freely. Each blossom, of five petals, an inch across, is white, with a pale pink spot at the middle.

Chilodia scutellarioides.—A neat bushy dwarf shrub, with Heath-like foliage. It blooms profusely, the flowers being Mimulus-shaped, half an inch long, of a pretty lilac-purple colour. It deserves a place in every greenhouse.

Trachymene linearis.—A dwarf bushy plant, having small narrow leaves. The flowers are small, white, produced in corymbous terminal heads, each head about an inch and a-half across. The plant blooms freely, and the pretty heads of blossoms remind us of a diminutive head of the flowers of our Elder-tree.

Acacia platyphylla.—A. ovalifolia, A. olivifolia, and A. undulæfolia, are in beautiful bloom, their rich yellow globe-shaped fragrant flowers being pleasingly ornamental. Numerous other kinds are showing bloom in profusion, which will beautify the greenhouse throughout the winter and spring months. This family of plants deserves to be more generally grown, and every greenhouse ought to contain a selection.

Brachycoma iberidifolia.—Some pots of this beautiful annual are in fine bloom, their numerous Michaelmas Aster-like flowers of blue, lilac, white, purple, &c., are exceedingly pretty and ornamental, and make a fine autumn display.

Chorizema cordata, C. varium, and several of the beautiful **Corræas**, were in bloom, each being pretty. The latter tribe of plants is one of the finest for winter and spring bloom. Easy of cultivation and profuse in flowering render them very valuable.

In the Stove.

Gloxinia maculata.—This noble flowering species is grown in a pan six inches deep and sixteen across. In such a pan there were nine flowering stems, each producing from twelve to fourteen blossoms. The flowers are large, of a pretty French-lilac colour, with a dark blotch inside. It is a fine plant for the stove.

Begonia fuchsioides.—Its fine scarlet blossoms are now becoming very ornamental, also those of the **Gesnera zebrina, Ixora coccinea, Chiritii Moonii**, and **Angelona grandiflora**, its long spikes of light-blue flowers are very pretty.

The purple and the white-flowered Menziesas are now very pretty in the beds of shrubs, a few circular beds are filled with them, and the centres being raised, the effect is now exceedingly pretty. These interesting Heath-like plants and flowers ought to be grown in every shrub border or bed. They bloom profusely, and may be purchased at a small cost.

OBSERVATIONS ON THE ARRANGEMENT AND MANAGEMENT OF PLANTS GROWN IN WARDIAN CASES.

BY MR. WILLIAM CHITTY, FLORIST, OF STAMFORD-HILL, NEAR LONDON.

THE remark occurring in the course of the observations upon Wardian Cases, in your last Number of the FLORICULTURAL CABINET, that "much may be done in a small Case by a little management," is exemplified in the multitude of instances in which collections of plants are so successfully cultivated in them. The difficulty appears to be with the possessors of these cases, as with the possessors of larger means, to repress a desire to grow everything in them. Hence we very often find the most perfect incongruity in the arrangement of them; plants of large and vigorous growth overrunning and obscuring those of humbler and more fragile habit. For instance, in a Case containing Ferns it is not unusual to see such gems as Asplenium septentrionale, A. fontanum, Cryptogramma crispa, Lycopodium alpina, &c., overrun and destroyed by such comparatively ungainly plants as Scolopendrium officinarum, Aspidium, Felix femina, &c. Whereas, the situation of the Case being favourable, these smaller things would display themselves to much greater advantage if the whole area were appropriated to them by a judicious arrangement of the surface of the mould. And very often, in addition to the large plants above mentioned, Lycopodium stoloniferum, L. denticulatum, and L. purpureum, will be found intertwining themselves with everything in the Case, and by their rapid and exuberant growth speedily filling up the Case, and creating an excess of moisture which is often injurious in its effects upon some of the smaller and more delicate things. The amount of gratification to be derived from this mode of cultivating plants will be commensurate with the degree of success realized, therefore, in the construction of the Cases, regard must be had to the habits of the kinds it is intended to grow. If it is intended to have a collection of the small plants first mentioned above (I confine my remarks to Ferns, for the sake of simplicity, the same observations will apply to other classes of plants), a small Case, ten inches in height, with a flat glass top, would be sufficiently high, the area laid out in *miniature rock-work*, and the plants inserted in it judiciously would produce a most pleasing effect. It would add greatly to the charm of such an arrangement to have suspended in diminitive rustic pots or baskets, from some wires inserted in the top, plants of some of the neater-growing Lycopodiums, as they harmonize better with the foliage of the Ferns than Cactuses, Sedums, Stapelias, and other similar things very often associated with them. Lycopodium denticulatum, L. stoloniferum, and L. purpureum, produce the most pleasing effect, when suffered to run wild in a glass by themselves. And in order to their full development, and an effective display of their noble fronds, the larger Ferns will require ample room. But in penning the above remarks I have quite gone astray from the object I proposed to myself when I sat down, which was, to remark on the composition of the soil I have found the most useful in the culture of plants in these Cases. These I must reserve for the next Number.

THE PROGRESS OF THE PELARGONIUM.

(*Continued from page* 248.)

BY ORION.

1845. We are now very close upon modern times, and as most of the varieties about to be named are still in cultivation, and many, indeed, likely to be popular for some years yet to come, it is presumed that a brief enumeration of the names and the prices will be of sufficient purpose to bring this series of notes to a conclusion.

It was stated in the last article, Mr. Beck first appeared with his productions in the year 1844, in like manner we have now to announce that another very celebrated raiser first made his *début* the season afterwards, and when Champion, Titus, Pompey, and Sarah-Jane, are mentioned as among the first of this gentleman's long series of popular seedlings, it will be easily guessed that the renowned Mr. Hoyle, then of Guernsey, but now of Reading, is the fresh "champion in our lists," and right glad are we that he was induced to take up so interesting a pursuit. Mr. Miller, of Ramsgate, was the party selected to "let them out" this year, but various were the parties who afterwards aspired to this honour. The prices of them were, Pompey and *Titus respectively 63*s.*; Champion, 42*s.*; and Sarah-Jane only 21*s.*, though it turned out the most popular, and it is the writer's opinion that it was the best model for shape which had then appeared. Mr. Foster's flowers were Nabob, *Phæon, *Dr. Lindley, *Miss Peel, *Duke of Devonshire, Rosetta, each at 42*s.*, and Magician, *Psyche, *Robustum, *Sultana, the Cid, and Shield of Achilles, each at 21*s.* Mr. Lyne's Confidence, Imogene, King of Saxony, and Sappho, were each priced moderately at 21*s.*, while a variety raised and sent out by Gaines, *Duchess of Leinster, still figured at 63*s.* Thurtell's Othello, Silverlock's Chance, *Cock's Hector, Medora, and White Surrey, were respectively advertised at 21*s.* Sultana, and Chandler's Celestial (the latter novel, with a very pure throat), commanded a good sale by only being priced at 10*s.* 6*d.* Garth's Magog, his only flower of this year, at 42*s.*, will suffice to complete the list. To pass on to another season, the year 1846 will be found to have been productive of much novelty, and another step in the onward march accomplished by dint of much perseverance.

To commence with the "flower of the season," which undoubtedly was *Drury's Pearl, sent out by Catleugh, at three guineas, and considering that this highly-popular flower was the first *pure white*, without the heretofore invariable *plum veins or spots*, it was not dear at the price. One thing may be mentioned to prove the superiority of this flower, that it was exhibited more times than any other flower, during the year 1850, as may be seen on reference to page 316 of last year's volume. Mr. Hoyle's flowers were Chimborazi, three guineas (which undoubtedly was the direct parent of Mount Etna, and other crimson beauties), Alice, Augusta, Duke of Orleans, Gipsy Maid (a little gem, but of very bad habit), Josephus, and Lord Morpeth, all priced at one guinea. Mr. Beck's Desdemona was a great acquisition, and being the first flower of that description became very popular, it was sent out at one guinea, as were also the same raiser's *ARABELLA, *BELLONA, *ISABELLA (a pretty strawberry-coloured flower), *JUNO, MARC ANTONY, *MUSTEE, OTHELLO, *ROSY CIRCLE, and *SUNSET; ZENOBIA and MARGARETTA were only half-a-guinea. Although so numerous they were generally good, as may be judged by so many gaining a seedling prize. Having mentioned the two *new raisers'* lots, Mr. Foster's ARDEUS and *ORION, each priced at three guineas, are next worthy of notice, and the latter particularly so, from the large and continued popularity it so long maintained, being driven out of the field by *no less* important a flower than Foquett's Magnificent, but matters must not be anticipated. Mr. Foster's other flowers were DUKE OF HAMILTON, one guinea; QUEEN POMARE, three guines; and SAPPHIRE, two guineas. A good white CAMILLA ALBA, from Gaines's, at one guinea, divided attention with PEARL, but could not approach it for *quality*, the plum-spot was, however, more decided, "that is less veined;" the same grower's MISS HOLFORD, at two guineas, and GRANDIS, one guinea, must be named, as also Mr. Garth's only flower of the year, COMUS, at one guinea. Mr. Lyne kept up his reputation with three flowers, HESPERUS and MARMION, each a guinea and a-half, and MERRY MONARCH, one guinea; the two first long continued popular, MARMION perhaps from its amazing freedom of bloom. To this list one only need be added, Mr. Cock's MILO, advertised at two guineas. To comment on the progress of the year, it will be seen that, besides form and colouring, other properties are brought forward, and habit, freedom of bloom, with constancy, begin to exert a great influence on the improvements now being rapidly advanced. To illustrate these remarks, ORION can be instanced as a specimen of *good habit*, MARMION for *freedom* in flowering, and MUSTEE, or ROSY CIRCLE, may be cited as good examples of constancy.

To the year 1847 attention must now be turned, and it will be found that a great stride was again made in an onward direction. Mr. Lynes's FORGET-ME-NOT must be first on our list, and it may be said of it, that it is second to none, even at the present time, to take it for every useful property; it was sent out, as were all this celebrated raiser's productions, by Mr. Rendle, of Plymouth, and only priced at thirty shillings. The same raiser's FIREFLY also at thirty shillings (small but pretty), and THE PERI at one guinea, were also sent out this year. Mr. Foster's flowers were ARIEL, three guineas; ARMADA, *PARAGON, and *PAINTED LADY, each at two guineas; also PERICLES, at thirty shillings. Painted Lady was, perhaps, one of the first flowers possessing a very pure white centre, making this style of flower so attractive. Mr. Beck had a famous lot this year, among them *AURORA, at two guineas, stands conspicuous; *BACCHUS, *COMPETITOR, *HEBE'S LIP, and SIRIUS, at one guinea and a-half; and *RESPLENDENT, one guinea. Two of what are now termed TRADE-FLOWERS were also sent out by Mr. Beck, BLANCHE (a good white, but very apt to curl), and GIGANTIC (indeed a noble large flower), each at fifteen shillings. Mr. Hoyle's *MOUNT ETNA must be mentioned as one among the most notorious of this gentleman's raising, it was priced at the low sum of one guinea; his *HEIDO and *SUNSET, a guinea and a-half, and *ISABELLA, one guinea. Stewart's CLARA, at two guineas, was a nice high-coloured flower, but did not get into the large cultivation its merits deserved, perhaps from the raiser not being sufficiently known. MARY QUEEN OF SCOTS and PRINCESS OLGA were each raised and sent out by Mr. Gaines, at two guineas. Mr. Garth's flowers were COUP DE SOLEIL, EMPEROR, HERCULES, MARS, SULTAN, and NEGRESS, each two guineas; the latter has proved itself one of the most popular exhibition flowers, being stout, of good habit, and a free bloomer. EUREKA and QUEEN OF TRUMPS, though priced at three guineas, were not of so much importance as Mr. Garth's other flowers. Mr. Catleugh had a pair this season, AGRIPPINA, at two guineas, and RACHAEL-SUPERB, one guinea, the latter being a silvery-white with nicely-blotched plum-violet upper petals.

BRIEF REMARKS.

STRIKING CUTTINGS OF STOVE AND GREENHOUSE PLANTS IN BURNT CLAY.—Three years ago I was advised to try this kind of material; and having done so with the greatest success, I can most confidently recommend it to the readers of your Magazine. My collection comprises nearly all the best of stove and greenhouse plants. Burnt clay possesses the property of absorbing *ammonia* from the *atmosphere*, which affords a constant and regular stimulus to the cuttings, and enables them very quickly to send out the radical fibres. I strike a great number of the cuttings from single eyes; that is, cut it through horizontally close under the bud, leave the leaf entire, and cut off the shoot about an inch above the bud. I plunge the pots one-third deep in a slight tan-bed. I do not lose five in a hundred cuttings so treated. —*A Country Curate.*

ON THE WIRE-WORM.—Having seen many inquiries respecting the manner in which the wire-worm might be destroyed, induces me to send you my method of treatment for their destruction. For nearly two or three seasons I had nearly all my Dahlia plants destroyed by those destructive pests, the wire-worm. After having tried various experiments, that of burnt earth succeeded entirely to my satisfaction, not having a plant the following season injured. Thinking this might prove beneficial to numbers of your readers, if you think it worth insertion it is at your service. The burnt earth may be made by burning the refuse of the garden in dry weather.

BOTANIC GARDEN, VIENNA.—We are informed that a fine specimen of Paulownia imperial is now in flower here. The tree is about thirty feet high, and has at least four hundred flower spikes, upon each of which can be counted from fifteen to forty flowers. It is truly a magnificent object. If we could succeed to get a large tree to flower in England, this fine plant would redeem its character. The flowers quite perfume the surrounding neighbourhood. At Vienna, during the winter of 1849-50, the specimen which is now in flower endured a cold of 24° Reaumur, or 20° below zero of Fahrenheit. Last winter was very mild, and there was no spring frost there, which was of course very favourable to the development of the flowers.

SEEDLING FLOWERS.—Observing the award of a Certificate the other day by the National Floricultural Society to Mr. Paul for "Seedling Roses," and having heard Mr. Paul state openly that he bought these Roses in France last summer, I wish to ask the Committee if the above award is to form a precedent, and if it will be allowed as such in a case as follows:—A makes a journey into Devonshire, and finds a seedling Rose in the garden of B, which he, A, purchases, propagates, and exhibits in the neighbourhood of London. Now, according to our present floricultural code, with the above as a precedent, A can take a prize for it as a seedling by affixing his name to it, as in this instance Mr. Paul has done. I do not by any means wish to impugn Mr. Paul's right to do so; I only wish to know the law upon the subject. I remember that when Lucombe and Pince bought the Rosa Devoniensis of the raiser, they named it, but did not call it "Devoniensis (Pince's)." Such an addition would have implied that they raised it from seed, instead of what is called "buying the stock." Taking this view of the question, Mr. Paul should have exhibited his Roses simply as Queen Victoria, Robert Burns, and Prince Albert, without the addition of "Paul's." A few words on this point from the officials of the National Floricultural Society in your columns will be of great interest to many growers, as many florists buy seedlings of amateurs. Mr. Foster, I think, sells his Pelargoniums, but has his name retained as the raiser. —*Inquirer.* (*Gardeners' Chronicle.*)

ALLAMANDAS.—At the last exhibition at Chiswick I observed some beautiful plants of Allamanda, which, in my opinion, would have looked much more handsome if they had been left to take their natural shape, instead of being twisted and bundled together round sticks or wire trellises, as they were on that occasion, and which I believe is the common way of growing them. Surely the Allamanda is neither a creeper nor a climber, and why should it be made to exhibit the character of these? I have at this time plants of A. cathartica, from three to six feet high, full of flower, and one stick in the centre is all I use for the tallest one. My plants were started into growth in the beginning of March, on a gentle bottom heat, after being cut back to the last joint, and potted in a mixture of loam, peat, and sand, using a double quantity of loam to that of peat. All the eyes were allowed to burst; and when the young shoots were about six inches long, they were thinned out according to the strength of the plant, always retaining the strongest; the plants were kept in bottom heat as near the glass as possible, and allowed but little pot-room until they showed the first flowers, when they were removed into larger pots placed in a cooler house, without bottom heat, and exposed to as much light and air as possible. I know of no stove plants that repay attention better than Allamandas, for if well attended to with water, &c., they will continue to produce abundance of flowers from the beginning of June to the end of September.—*W. S.* (*Gardeners' Chronicle.*)

STRIPED PANSIES.—We have recently had a dozen varieties sent us. The flowers are not only beautiful in stripes, but of very good form, some of them quite equal to our best of the usual class. No doubt but there will be annual advances to perfection in form in this new and very interesting section. They will prove a valuable addition to this lovely family of flowers, similar to what has been realized by the addition of the *fancy class* of Dahlias to those we previously possessed.

TRANSPLANTING EVERGREENS.—My experience in this branch of gardening for the last twelve months has caused me to alter my opinion of the best time in the year for performing the work. Whether I am wrong or not, there can be no harm in telling my tale, in order that gardeners may test the subject, or, at any rate, to open the question once more, and to try experiments on it, and record them. Among reading gardeners the question about the best time for transplanting *large evergreens* has been settled for some years, August and September being the two best months. Last year I pushed the whole month of July into the scales, as being quite as good, if not better, than September for this work. Putting off the work to November, as was the fashion not long ago, is certainly not the best way to succeed. The large box bushes I planted last June, under a fierce hot sun and a long drought, have done as well as any one could wish; not a sprig of them has died, and they are now growing as well as can be. In July and August following we removed very few things; but from last September to the end of this last May we had to move some almost every week, as the alterations going on in the garden suggested; a "second thought" caused the removal, this spring, of some large specimens that were only transplanted last autumn, and, as luck would have it, these plants happened to be of different families, there being hardly two of a kind which had to be thus dealt with the second time; it was from these that I took up my new notion of the best time for transplanting evergreens, and the history of one specimen will show my reason and meaning.

About the end of last October we removed an evergreen Cypress (Cypressus sempervirens). It was a fine plant, above twenty years old, and more than that number of feet in perpendicular height; but having had two leaders near the top, the opportunity was taken advantage of to reduce it to one leader, and the shortest being the best formed one, the longest was cut off, which reduced the height of the plant two or three feet. This Cypress, like all the rest of them in the garden, never ceased to grow the whole winter; and no one could see now, from any indication, that it had been removed these ten years: but it was transplanted twice since last autumn, first in October and again in April, and both times with horse power; but all this time it had not formed one single new root, nor made the least effort to heal over the ends of any damaged roots. I confess that, under the circumstances, I could hardly believe all this if I had not seen it,—a fast-growing evergreen removed in the autumn, and kept on growing through the mildest winter any one can remember, and still, up to the very end of April, not having made the least effort to increase or repair its roots. This led me to examine the roots of several kinds of evergreens all over the garden—those that were not transplanted as well as those that were—and from the whole I have come to this conclusion, that *every month* in the whole year, if the winter is very mild, is the ***best month*** for **SOME PARTICULAR PLANT** to be removed, and that I, and the whole of us, were quite wrong in supposing the autumn, or any particular time, to be the best time for *all* evergreens to be removed. We might just as well have broached a new doctrine about potting every plant we grow, bulbs, orchids, and all, in one month, as to assert that one particular month in the autumn, or spring, or summer is the best time for all evergreens to be moved; but let us have more observations than mine recorded on the subject.—*D. Beaton.* (*Cottage Gardener.*)

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—*On the Theory of the Formation of Wood and the Descent of the Sap in Plants, by Dr. Lankester.*—The author drew attention to the theory of the formation of wood in plants, and objected to the view that the leaves form the wood, on the ground that the ligneous, like all other tissues, were the result of the growth of cells which were not formed in the leaves, but in all parts of the plant. Wood was formed in all parts of the plant where elongated cells were generated, quite independently of leaves, or the formation of leaves; as in the lower part of the cut wounds of the stems of plants, in the portions of trunks left when trees were cut down, in the abortive branches formed in the bark of such trees as the Elm and the Cedar, and in other parts of the vegetable structure. He also objected to the theory of the formation of the ligneous or any other secretion, which might be subsequently appropriated by the cells, in the leaves alone. He maintained that all the facts brought forward to support the theory of the descent of the sap might be explained on the known fact of the ready permeability of the tissues of the plant. He related the details of experiments performed on the species of Spurge, in which the fluid was found to exude from the stem and branches in these plants just in proportion of the quantity of fluid contained in the plant above or below the section made, and not in obedience to any law of the descent of the sap. The cells of plants were nourished in two ways: first, by the sap containing carbonic acid, ammonia, and other substances; and, secondly, by materials, as sugar, gum, &c., formed in the cells. These latter were not formed solely in the leaves, but in all cells. He regarded the leaves as organs by which the water of the sap was got rid of, and by this means a further supply of sap from the earth and atmosphere was insured. The way in which the demand for sap was insured might be imitated by a common sponge, on the upper surface of which evaporation went on, and the lower surface, being in contact with water, would always supply this fluid, as a demand for it was created by the evaporation above. This phenomenon had been attributed to a specific vitality; but it was unphilosophical to speak of vitality as a force, when it could not be demonstrated to exist, and especially when physical forces were capable of explaining the phenomenon.

Professor Henslow said that he agreed with the views of Dr. Lankester with regard to the theory of the formation of wood proposed by Dupetit Thouars. He thought it was evident that whatever was the function of the leaf, it did not send down the woody fibres which formed the trunk and branches of exogenous trees. The tracing the woody fibres up to the leaf did not prove their origin there. With regard to the descent of the sap, he did not agree with the author of the paper, who, he thought, took too physical a view of the function of the plant. The leaves were not mere organs of evaporation. They performed the function of exhalation, which was independent of heat, and depended on the vitality of the plant. He believed that the leaves did effect a certain change in the juices brought to them, which changed matter was again taken back into the system of the plant, and there being taken up by the cells, produced the results which were found in the deposit of lignine and the other secreted matters of plants.—Mr. Huxley quoted the instance of the rapid growth and great quantity of wood formed by the various kinds of Lianes of tropical forests as instances in favour of the formation of wood independently of the leaves. These plants had all of them a remarkably small number of leaves.—Professor Asa Gray believed that the theory of the formation of wood, as held by Du Hamel, Dupetit Thouars, and others, was no longer tenable. The formation of vessels from cells could be easily observed, and in exogenous plants there was no vacant space between the wood and the bark for the woody fibres to be sent down through. Even in the spring of the year, when the sap was passing most rapidly between the wood and the bark, the organic connexion was complete. Whether matter was elaborated in the leaves and sent down into the plant he was not prepared to say, but further experiments were desirable.—Dr. Fowler quoted some experiments which he thought proved that the materials of the growth of the plant were not prepared in the leaves.—Dr. Lankester replied, and stated that at present it appeared to him that the statement of the preparation of gum or any other secretion in the plant which was found subsequently in any other part of the plant, was an assumption that required proof. The practice of looking for analogies between the vegetable and animal kingdoms has led to the adoption of theories in vegetable physiology which were quite inconsistent with the simplicity of the structure of plants. In order to advance the science of vegetable physiology, we must fix our attention on the functions of the cell, and discharge all theories which were not compatible with our knowledge of its functions.

HORTICULTURAL SOCIETY'S ROOMS, REGENT STREET, OCTOBER 7.—Messrs. Weeks sent a bloom of the Royal Water Lily (Victoria regia), a bud of Nymphæa cærulea, and a flower and a leaf of N. dentata, from the open heated pond in their nursery, in which such plants have been found to grow and flower successfully. The leaf of N. dentata was certainly as large and fine as it could well be in the best-managed stove aquarium. It was stated that the Victoria had produced fifty blooms in the course of the past summer, and that the plant was still unprotected. A Banksian Medal was awarded.—I. Anderson, Esq., of Maryfield, near Edinburgh, sent a cut specimen of a seedling Veronica, which, although pretty, was inferior in beauty to V. Andersonii, a charming hybrid, raised by the same gentleman. Mr. Frost, gardener to E. L. Betts, Esq., of Preston Hall, Aylesford, furnished a seedling Begonia, obtained by crossing B. cinnabarina with B. nitida. The result is a freer-flowering plant than B. cinnabarina, with even higher-coloured flowers than those of that fine kind, while the foliage is very nearly the same as that of Nitida. A Certificate of Merit was awarded it.—Mr. Kennedy, of Covent Garden, sent a narrow-leaved variety of Scolopendrium officinale from Yorkshire.—Mr. Stark, of Edinburgh, sent a new purple and lilac-flowered Linaria, called Arabida, which looked as if it would make a good rock plant. It was raised from Portuguese seeds, collected by Dr. Welwitzsch, in 1849.—Messrs. Jackson, of Kingston, sent half a-dozen nicely-blossomed plants of Odontoglossum grande, which had been flowered in a cool house. It was mentioned that this is one of the hardiest of exotic orchids, and that it has been even bloomed out of doors, during summer, under the shade of a Laurel bush.—Mr. Macintosh, Nurseryman, Maida Vale, Edgeware Road, received a Certificate of Merit for a very large and fine shrubby specimen of common Mignonette. This was a single plant, pricked out in a small state into a pot last autumn, and shifted on till it had attained its present size. It was remarked that Mignonette is not an annual, as many imagine it to be; but that it will become a woody shrub, and last for years, provided it is well managed, and kept free from frost and damp. The garden also furnished a large yellow Gourd, weighing 136½ lbs.; specimens of a yellow-striped Mushroom-shaped Squash, and a French Sulphurator. The great merit of the latter is its simplicity and cheapness. It consists of a tin-box for holding the sulphur, placed on the upper side of the pipe of a pair of common bellows. The sulphur gets into the pipe through small holes made for the purpose in the bottom of the box, and in order that no stoppage may take place, a small hammer-head attached at the end of a slight steel spring is fixed on the underside of the bellows, a gentle tap from which, now and then, keeps up a continuous fall of sulphur into the pipe. These appliances, which may be attached to a pair of bellows for little more than sixpence, answer every purpose for which they are intended, equally as well as a more expensive machine.

HEATING GREENHOUSES, &c.—Mr. Michael M'Sherry, of 3, James-street, Limerick, Ireland, exhibited in the Crystal Palace, Hyde Park, a MODEL APPARATUS, stated to be very effective. The following description is given of it:—"To be made of boiler plate-iron, with a metal front, for heating by circulation of air. The flame and smoke from the furnace pass under the stove to the extreme end, and then rise at the two sides, return to the front, and get over the top to the chimney, where they do not escape until they pass all round the stove and heat every part of it. The air of the house to be heated is drawn in brick flues under the floor to the under compartments of the stove, passes in them to the extreme ends, then rises to the upper divisions, and finally flows back into the house over a water-tank. In addition to this, there is a hot-air box on each side of the fire, through which external air is circulated, as well as through hollow fire-bars, discharging the great body of heat (which they usually absorb) into the house, and rendering it available for bottom heat. The stove is to be set in brickwork, and as the outside of it is as hot as any part, much additional heat will be obtained by leaving a space of two inches between the stove and brickwork, they bringing external air to act on the two sides, and pass into the house."

Cantua dependens.—A correspondent writes that in July he procured two plants, one was placed in a stove and the other in a greenhouse. The former grew the fastest for a-month, and then the foliage turned yellow, this was caused by the attack of the red spider, the plant was dusted over and under with sulphur, and the enemy was destroyed, still the plant has not yet recovered the disaster. The plant placed in a cool greenhouse has grown well, and has continued in excellent health. It is quite evident the plant will not thrive in the stove, but must be kept in a cool, dry greenhouse, or pit-frame, &c., if grown in pots, and in summer others will flourish in the open ground.

Prevention of Weeds on Walks, &c.—An asphalte composed of sand, lime rubbish, cinder ashes, and gas-tar, has been found to answer satisfactory, no weeds will grow upon it. It appears that the remedy is in the gas-tar, it being a foe to vegetable life. These materials do not appear at the surface very agreeable, but if half an inch of gas-tar be spread over the surface of the substratum of a walk and upon it be laid a coat of gravel two inches thick, the unsightliness of the former is avoided, and a neat gravel surface, freed from weeds, will be secured. Dr. Lindley states, in the *Gardeners' Chronicle*, that he had had some walks coated with gas-tar, thick enough to cover the moss, but it was found that the gas-tar became sticky as soon as it was warmed by sunshine, or even in dry weather. The application, however, stopped the growth of weeds effectually, and the piece of walk so treated nine months back is now as bare as when first done. Subsequently an extensive path in the shrubbery had been painted over with *hot* gas-tar, and when a few yards was done sand was sifted upon the walk and a roller drawn over it. Thus treated, the walk was firm, dry, and hard, and neither weeds or moss have since grown upon it, nor is there any trace of the walk having been tarred, the surface has the appearance of any other gravel walk.

MISCELLANEOUS SECTION.

Review.— *Observations on the Culture of Roses in Pots.* By William Paul. Second edition, pp. 43. London, Piper.

It contains practical remarks on the subjects of potting and preparing the plants, pruning, training, forcing, and retarding them for winter bloom; and has lists of varieties adapted for all purposes and seasons; also advice on budding, grafting, and choice of stocks, &c. That it is very useful the following extracts will confirm:—

"The soil in which Roses succeed well, and that generally used here, is, two parts of stiff turfy loam, broken up, but not sifted, two parts manure (road-gatherings laid by for a season, or the remains of a hot-bed, not too far decomposed), and one part burnt earth. This compost should be thrown up in a heap in autumn, and turned two or three times during winter, and a little newly-slaked lime scattered throughout to destroy worms and grubs. This is the soil used for the mass; but for the delicate varieties (Chinese, &c.) it may be improved by the addition of one part leaf-mould, or well-pulverised manure."

"Since the first edition of this little work was penned, Yellow Roses have become a special branch of culture. Separate prizes have been offered for them by the London Horticultural and Royal Botanic Societies. But what are Yellow Roses? This question provoked some discussion in the pages of the 'Gardeners' Journal' last year, through the withholding of a prize by the Royal Botanic Society. To prevent any misconception at future exhibitions, that Society has named the varieties considered eligible for competition. Let us reproduce them here:—

Yellow Banksiæ.
Single Yellow (Austrian).
Williams's Double Yellow (ditto).
Harrisonii (ditto).
Persian Yellow (ditto).
Old Double Yellow (Sulphurea).
Cloth of Gold (Noisette).
Solfaterre (ditto).
Le Pactole (ditto).
Narcisse (Tea-scented).
Smitheii or Smith's Yellow (ditto).
Pauline Plantier (ditto).
Queen Victoria or Princesse Adelaide (ditto).
Vicomtesse de Cazes (ditto).
Jaune, or Yellow China (ditto).
Sulphurea superba (ditto).

"We proceed to analyse this group. The first on the list—the Yellow Banksiæ—is a pretty enough Rose, with small flowers produced in clusters. It may be grown well in a soil composed of equal parts of loam, peat, and leaf-mould. It requires but little pruning; the mere tips of the shoots may be taken off. Spiral training is recommended as the most suitable. The succeeding five varieties are nearly allied in nature, and may be grown in a soil similar to the last. Manure is here positively objectionable; but the addition of sand, unless the peat or loam be sandy, will prove advantageous. Very little pruning is necessary: some of the shoots may be cut out entirely; the others have their mere ends taken off. If grown on their own roots, they may be trained as globular or columnar bushes; if grown on stems, the branches may be drawn downwards in the form of a Weeping Rose. The two next in order—Cloth of Gold and Solfaterre—are of vigorous growth, producing large flowers of great beauty. Both are shy bloomers, especially the former. The same soil as recommended for Pot-Roses in general may be used for these varieties. Little pruning is necessary, and spiral training is recommended. Seven out of the remaining eight varieties belong to the Tea-scented, and the whole require a rich soil and close pruning. The most advantageous systems of training are the round bush or the pyramid. Were this group to be viewed critically, it might be said they are not all 'purely yellow.' It might also be said there are kinds excluded which have as just a right to the appellation of 'yellow' as they. But when it is considered that the declension from yellow to white and buff is so gradual that it is scarcely possible to fix the line of demarcation, and that a list of sixteen varieties is given from which to select six, these points of criticism are hardly tenable. If none others are allowed to be exhibited, or none whose flowers are less yellow when brought to the exhibition tables than those of the sixteen above enumerated, the practical utility of the arrangement will soon become apparent."

"*On forcing the Rose.*—Roses required for forcing will succeed tolerably well if potted early in the preceding autumn. It is, however, obvious that, by being potted a twelvemonth previously, they become thoroughly established, and are better enabled to support an accelerated growth and premature development of bloom."

"*Forcing-house.*—A span-roofed house, with a longer roof toward the south, is, perhaps, the best style of building. Heating by hot water, in its various modes of application, is generally acknowledged to be preferable to the old flue system, and in no instance is it more so than for forcing Roses; nevertheless they will flower well in houses heated with flues. Arnott's stove, which is used by some, is found to answer exceedingly well.

"Every precaution should be taken against mildew. If the weather be cloudy and wet, a brisk heat should be maintained, that we may not have a cold damp atmosphere. The application of sulphur is a well-known remedy, dusted on the leaves, while wet, from a dredging-box; and by admitting abundance of air, and at the same time applying fire-heat, should the house be damp, to establish a free circulation among the plants, its progress will certainly be arrested."

"*Ripening the Wood.*—It is important, with regard to Roses intended for forcing, that the wood be *well ripened* early in autumn; and to effect this end they should be placed in a sunny and airy situation during summer, and should not have too free a supply of water when *completing* their growth. So soon as they have done growing, the shoots may be thinned out, the shortening-in of the shoots being deferred till the plants are conveyed into the forcing-house."

"*Housing the Plants.*—It is advisable to keep the plants as close to the glass as possible; and if a *gentle bottom-heat* can be secured, so much the better. When the buds begin to swell, the heat may be steadily increased till we reach 60° to 80° by day, and the night temperature should never be lower than 40°; a difference of 15° or 20° between the day and night temperature proving beneficial."

"*Watering.*—During their growth the plants should be freely watered; occasionally with guano-water, about the temperature of the house; or, if worms work in the pots, lime-water is an efficient remedy."

"*Syringing.*—In bright weather the plants should be freely syringed morning and evening; in dull weather very lightly, and once only; soot-water may be used here with good effect."

To obtain Roses late in the year Mr. Paul selects the autumnal class, pinches off all early-shown buds, but after the first of September allows all that appear to remain, and by which process he has gathered many beautiful Roses on Christmas-day. The varieties he recommends "are such kinds as produce a great quantity of flowers, and open freely. *Bourbons:* Armosa, Queen, and Phœnix. *Noisettes:* Fellenberg and Euphrosyne. *Chinese:* White, Fabvier, and Burdon," &c.

The work has our hearty commendation, and all readers will find it useful.

Balfour's Phyto-Theology. Published by Johnson and Hunter. 8vo., 240 pages.

This is an admirable little neat publication, containing much that is highly interesting and useful, and those of our readers who have to examine and study the works of God, especially as displayed in plants and flowers, may have a rich treat in the perusal of the book. We strongly recommend it to all our readers. The following extract on the "human clock" will convey somewhat of its interesting style:—

"The flowering of plants takes place at different periods of the year, and thus a calendar of the seasons may be constructed. By observing the exact time when plants in the same garden flower in different years, an indication will be given of the nature of the season. The Mezereon and Snowdrop, Hepatica, and Winter Aconite, put forth their flowers in February in this country, the Primrose and Crocus in March, the Cowslip and Daffodil in April, the great mass of plants in May and June, many in July, August, and September, the Meadow Saffron and Strawberry tree in October and November, and the Christmas Rose in December. Besides annual periods, some flowers exhibit diurnal periods of expansion and closing. On this principle Linnæus constructed what he called a floral clock, in which each hour was marked by the opening of some flower. . . . Richter, in his remarks on Linnæus' floral clock, contrasts it with the periodical occupation of man at different hours of the day. 'I believe,' he says, 'the flower-clock of Linnæus, in Upsal (*Horologium Floræ*), whose wheels are the sun and earth, and whose index-figures are flowers, of which one always awakens and opens later than another, was what secretly suggested my conception of the human clock. I formerly occupied two chambers in Schreeraw, in the middle of the market-place; from the front room I overlooked the whole market-place and the royal buildings, and from the back one the botanical garden. Whoever now dwells in these two rooms possesses an excellent harmony, arranged to his hand, between the flower-clock in the garden, and the human-clock in the market-place. At three o'clock in the morning the Yellow Meadow Goatsbeard opens; and brides awake, and the stable-boy begins to rattle and feed the horses beneath the lodger. At four o'clock the little Hawkweed awakes, choristers going to the cathedral, who are clocks with chimes, and the bakers. At five, kitchen-maids, dairy-maids, and Butter-cups awake. At six, the Sow-thistle and cocks. At seven o'clock many of the ladies'-maids are awake in the palace, the Chicory in my botanical garden, and some tradesmen. At eight o'clock all the colleges awake, and the little yellow Mouse-ear. At nine o'clock the female nobility already begin to stir—the Marigold, and even many young ladies who have come from the country on a visit, begin to look out of their windows. Between ten and eleven o'clock the court ladies and the whole staff of lords of the bedchamber, the green Colewort and the Alpine Dandelion, and the reader of the princess, rouse themselves out of their morning's sleep; and the whole palace, considering that the morning sun gleams so brightly to-day from the lofty sky through the coloured silk curtains, curtails a little of its slumber. At twelve o'clock the prince, at one his wife and Carnation, have their eyes open in their flower-vase. What awakes late in the afternoon at four o'clock is only the red Hawkweed and the night watchmen as cuckoo-clock, and these two only tell the time as evening clocks and moon-clocks. From the hot eyes of the unfortunate man who, like the Jalap plant (*Mirabilis Jalapa*), first opens them at five o'clock, we will turn our own in pity aside. It is a rich man who has taken the jalap, and who only exchanges the fever-fancies of being griped with hot pincers for waking gripes. I could never know when s two o'clock, because at that time, together with a thousand other gentlemen, and with the yellow Mouse-ear, I always fell asleep; t three o'clock in the afternoon, and at three in the morning, I e as regularly as though I was a repeater. Thus we mortals may flower-clock for higher beings, when our flower-leaves close upon ast bed; or sand-clocks, when the sand of our life is so run down it is renewed in the other world; or picture-clocks, because, when death-bell here below strikes and rings, our image steps forth from se into the next world. On each event of the kind, when seventy s of human life have passed away, they may perhaps say, 'What! er hour already gone! how the time flies!'

The closing of flowers also follows a periodical law. Most flowers during darkness. Some close even in day-light. Thus the Salsafy s up its head of flowers about mid-day, and the Chicory about four e afternoon. Many flowers are affected by the nature of the day gards moisture, dryness, cloudiness, or clearness. In cloudy and r weather, the flowers of the Scarlet Pimpernel, called Poor-man's ther-glass, remain closed. So also do the heads of flowers of the y, Dandelion, and other composite plants. By this means the tial organs of the flower are protected from injury. The direc- of the flowers of some plants seems to be influenced by the sun's ; and the name Girasole, or Sunflower, was given, from an impres- that the heads of flowers inclined towards the part of the heavens e the sun was shining. This does not, however, appear to be the with the Sunflower, as grown in this country.

The diurnal periods in flowering are alluded to by the poet in the wing lines :—

" 'In every copse and sheltered dell,
Unveiled to the observant eye,
Are faithful monitors who tell,
How pass the hours and seasons by.

" 'The green-robed children of the spring
Will mark the periods as they pass,
Mingle with leaves Time's feathered wing,
And bind with flowers his silent glass.

" 'See Hieracium's various tribes
Of plumy fruit and radiant flowers,
The course of time their blooms describe,
And wake and sleep appointed hours.

" 'Broad o'er its imbricated cup
The Goatsbeard spreads its purple rays,
But shuts its cautious florets up,
Retiring from the noontide blaze.

" 'On upland shores the shepherd marks
The hour when, as the dial true,
Cichorium to the lowering lark
Lifts her soft eyes serenely blue.

" 'Thus, in each flower and simple bell
That in our path betrodden lie,
Are sweet remembrancers, who tell
How fast the winged moments fly!' "

L.

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

PLANTING and transplanting trees and shrubs, forming and altering walks, laying down turf, and all kinds of alterations and improvements, where such is desirable, will now require attention. Proceed with all despatch to plant shrubs, herbaceous plants, &c., to enable each to become established before spring. Amongst other out-door occupations, are pruning a variety of things, supporting and protecting them at the same time, as may be deemed necessary. In the protection of tender things, the principles demanding attention are few and simple. A comparative degree of dryness is the first great essential, whether in the atmosphere or the soil. In a frame or pit, this amount of dryness cannot be guaranteed without motion in the air; and this, of course, in the absence of fire-heat, must be accomplished by a very free ventilation at every fitting opportunity, remembering that a small amount of frost is, in general, less prejudicial than an *accumulation of damp*, which will rapidly tend to a kind of mortification in the system of the plant. The same atmospheric conditions are to be obtained out of doors, as far as attention can secure them; thus, half-hardy plants against trellises or detached, if covered with a mat and stuffed closely with hay inside, will be in danger of perishing of what we may for the present term suffocation; the same specimen will always run through a long winter better with the mat alone, more especially if the collar is well protected by some dry and porous material, and, above all, the root well top-dressed with sawdust or ashes, or perhaps the two blended. As to comparative dryness of the soil, that must be accomplished principally by the most perfect drainage; this is, indeed, the great desideratum with plants of tender habits; indeed, without it, other appliances are seldom satisfactory. Mounds of new sawdust, or dry leaves, raised around the stem, with a considerable body over the soil as far as the root ranges, will be found of immense benefit, as retaining the ground-heat, which we believe ascends in a progressive way up the stem, to alleviate the effects of very severe weather. Standard and dwarf Roses of tender character will soon need protection. Finish directly the planting of all bulbs and Ranunculus, &c., which are intended to be put in before winter; a little sand round each will assist in preserving them from wet. Also plant out in a sheltered situation Brompton or Queen Stocks, so they may be protected in winter, and reserved for planting out in spring. Tubers of Salvia patens, &c., should be kept dry. Plants of spring flowers, as Hepaticas, Primroses, Polyanthuses, Auriculas, Wallflowers, bulbs, &c., should now be planted near the dwelling-house.

FLORISTS' FLOWERS.—*Auriculas* and *Polyanthuses* still require well looking after. A free circulation of air amongst the pots be given by raising the frame a few inches from the ground. *Tulips* should be planted as the first opportunities offer. The readiest and most regular way is to plant them on the surface of the bed unfilled to within four inches of the destined surface. Seven strings are then stretched lengthways at equal distances, and secured by nails at each end of the bed; when the bulbs are planted a short line crosses these, and a bulb is placed at each section; the small line is then removed the requisite distance, and another row put in. When the bed is planted, the strings are removed, and four inches of soil placed over the roots very carefully, so that none are displaced. *Hyacinths* should, if not already done, be potted or glassed immediately. For blooming in glasses, *use rain or river-water*, adding to each pint a tea-spoonful of Cole's chemical preparation in powder, which will be found greatly to increase their luxuriance; fill up the glasses with this liquid until it will *just touch the bottom of the bulb;* place them in total darkness, and change the solution about once a fortnight; in doing this, hold the bulb in its place, and pour out the contents, filling up again as before. In a few weeks, the roots having advanced considerably, they may be removed to a window or other light situation. *Pansies*' straggling shoots may now be cut closely, leaving a joint above the ground, and hoops should be placed over the choicest beds, that protection may be given in the event of sudden frost. *Carnations* will require all the air and exposure possible in damp weather, avoiding continuous wet; when plants appear mildewed, sprinkle a little sulphur over and under. *Pinks*—occasionally stir between the rows of plants. *Dahlias* should be taken up, advantage being taken of fine days; secure the labels firmly. *Chrysanthemums* should be placed where they can be freely ventilated, as they ought not to be kept close or warm, or they would soon become drawn and be attacked by insects.

IN THE GREENHOUSE, COLD FRAME, &c.

The proverbial dulness and dampness of the external atmosphere generally prevailing during this month is sufficient to induce more than the ordinary amount of care and attention. Plants of a succulent nature are liable to suffer as much from damp as from frost. Ventilation on all favourable opportunities is therefore highly necessary, closing the sashes early in the afternoon when a clear sky indicates frost; this precaution will often prevent the necessity of making fires in these houses. Give water sparingly, especially to plants which are impatient of wet, such as Calceolarias. Pelargoniums, and what are called Scarlet Geraniums, such as have been in beds and newly potted, should be kept nearly dry till they strike root afresh. For want of this care vast numbers are destroyed.

IN THE FORCING PIT OR STOVE.

All hardy and half-hardy plants brought in for forcing should have a temperature at first of from 50° to 60°, to be increased up to 75° when more advanced; but as many plants will not bear such heat, and others will not do much good without a high temperature, there should be two distinct pits, or divisions at least, for this purpose. The double Roman Narcissus is the first of the forced bulbs, and where they have been potted early in August they will now stand 60° of heat, and will be in flower by the end of this month. Cyclamens that have made good roots will stand forcing for a short time, and will soon throw up their blooms; but, like bulbs of all sorts, they are injured by forcing *before their roots* are made.

Introduce Roses, Lilacs, Violets, Lilies of the Valley, and other plants, to bring them early into bloom. Chinese Primroses, sown last spring, should be encouraged, that they may blossom about Christmas. These are extremely subject to suffer from damp; they ought, consequently, to occupy a dry and airy situation during winter.

HOLLYHOCKS.

The florists in Scotland have recently paid considerable attention to the improvement of these noble flowers, and have raised some fine varieties. The following twelve are selected by a celebrated grower (Mr. Downie) as the best:—Susanna, shaded white; General Bem, vivid scarlet; Napoleon, shaded lilac; Captain Peat, light purplish-rose; William, purplish-maroon; Spectabilis, fine rosy-peach; Illuminator, deep crimson; Professor Syme, deep rosy-purple; Lord Willoughby d'Eresby; Sir David Wedderburn, dark chocolate; Nova Scotia, dark maroon; Mesmeriser, nearly black. These varieties may be obtained of the nurserymen and florists in Scotland, and are deserving a place in every collection.

CARNATIONS AND PICOTEES.

It may assist purchasers of these charming flowers in giving a list of some of the *most superb* varieties in each class, as taken on inspecting the most celebrated collections during the past summer. That they are excellent may be fully relied upon.

Scarlet Bizarres: Admiral Curzon, Splendid, Lamartine, Emperor, Howard, Bolinbroke, Bardolph.

Crimson Bizarres: Duncan, Owen Glendower, Queen Victoria, Lord Milton, Prince Albert, Jenny Lind.

Pink Bizarres: Falconbridge, South London, Princess, Kirke White, Sarah Payne.

Purple Flakes: Premier, Squire Trow, Poins, Perfection, Mayor of Oldham, Squire Meynell.

Scarlet Flakes: Cradley Pet, Splendour, Justice Shallow, Simpson's Victoria, Firebrand.

Rose Flakes: Ariel, Lorenzo, Flora's Garland, Princess Royal, Antonio, Romeo, Madame Sontag.

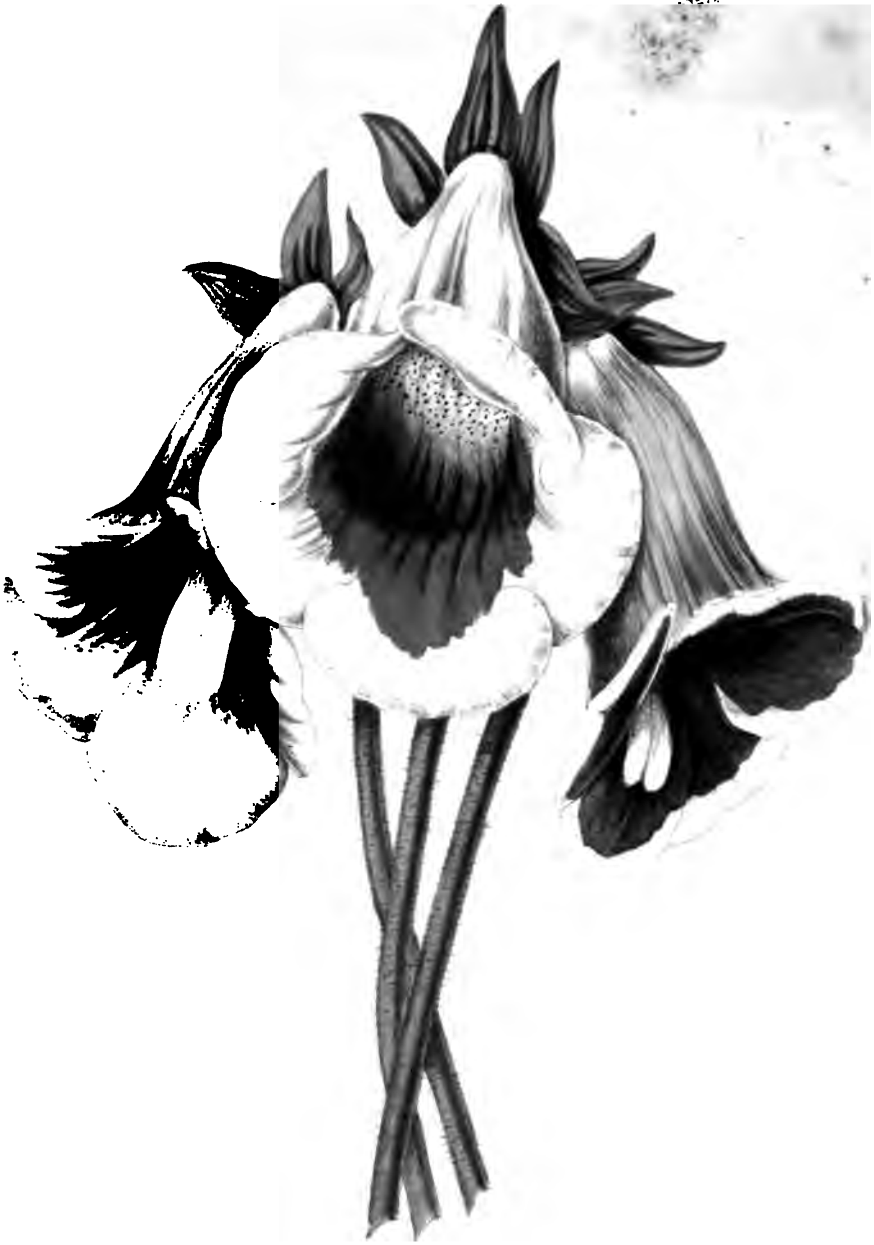
Picotees.—*Heavy Red:* Mrs. Norman, Prince of Wales, Hogarth, Julia Romano, Mary, Elizabeth.

Light Red: Alfred, Duke of Rutland (superb), Prince Arthur, Lord Nelson, King of Purples.

Light Purple: Ophelia.

Heavy Rose: Victoria Regina, Grace Darling, Princess Royal, Unexpected, Venus, Jeannette, Green's Queen.

Light Rose: Mrs. Barnard, Countess Howe, and Nina.



Gloxinia.
Marie Van Houtte.

Dr Lindley

Mr Hoogeveen.

DECEMBER, 1851.

ILLUSTRATIONS.

GLOXINIAS.—Marie Van Houtte, Dr. Lindley, and Mr. Hoogerveen.

Mr. Van Houtte, nurseryman, of Ghent, has paid considerable attention to the cultivation of this lovely tribe of free blooming plants, and possesses an unequalled collection. A vast number of seedlings have been raised in his establishment, from which the very best have been selected, and sent out recently. Mr. V. Houtte has more than one hundred of the best kinds, among which are the three varieties we now figure. They are of fine form, good substance, and very distinct from any others we have seen. They merit a place in every collection; and some of this charming family of plants should be grown wherever practicable.

Raising seedling flowers with a view to obtain varieties of superior form and distinct in colours from any previous kinds is a most interesting and pleasing process. The following method of raising seedling Gloxinias has been very successfully practised; and as some of our readers may be desirous to assist in improving this beautiful tribe of flowers, we give the particulars:—

Principally impregnate the flowers which are produced at the *early* period of the year, and thus well-ripened seed will be obtained in summer, and the advantage secured of sowing it as soon as ripe, and the young plants will form tubers that season, which will endure the "*rest*" of winter, and a year is gained by it. When the seed is sown as soon as ripe, it more certainly vegetates than when it is retained till the following spring. Sow the seed in flat pan-pots. Have a free drainage, use a turfy-chopped sandy-peat soil, the surface made even, and a quarter of an inch of silver sand spread over it, upon which scatter the seed, pressing it gently into the sand, and sprinkling over it just as much sand as will cover it out of sight. Place the seed-pot in a hot-bed frame, covering it over with a piece or bell glass, and the plants will soon appear. When they are strong enough, pot the plants into small pots, in a compost of sandy peat, light loam, and old *rotten* cow-dung in equal parts. When potted, replace them in the hot-bed frame. About October *gradually* withhold water, and place the pots in the shed, or cool part of the greenhouse, so as to preserve them from frost. As soon as signs of returning growth are seen the second season, pot the tubers, and treat them similar to older plants.

Such kinds as prove fine and distinct should be increased. Scoop out a leaf, *with the bud* at its base, from the parent stem or trunk; insert it in white sand or sandy peat, pegging it securely down with hooked pegs, and it will soon take root; by due attention none will fail.

When a leaf, *with its bud*, cannot be obtained, pursue the following method:—Fill a pot with sandy peat, to about an inch from the rim, upon which spread half an inch of white sand, settle it with water, take the leaf and cut through the strong ribs, at the under side, in a few places, and then spread it flat upon the sand, the *rib side* to the sand, and secure it down flat by means of pegs or pebbles, but have a peg to secure down the stalk. Place the pot in a hot-bed frame, or similar situation, where it can have bottom heat, cover with a bell-glass, and from the sides of the cuts tubers will be produced. This method succeeds well; but a larger tuber is sooner formed when the *leaf bud* is attached, as by the first described process.

Blooming Plants.—Early in February take one-fourth of the tubers, pot them in the following compost: equal parts of loam, leaf-mould, sandy peat, and old rotten cow-dung, with a few bits of pots or charcoal mixed therein; have it in a *rough* state and a *free* drainage. Place them in a hot-bed frame or bark bed, and duly attend to their future culture. Repot when required; but do not disturb the ball of roots and soil. At the end of six weeks or two months pot another portion of the tubers, and thus again in succession, and plants may be had in bloom nearly all the year. When the plants have done flowering, *gradually* withhold water, to give the tubers a season of *rest*. Have each successive portion of tubers kept separate, marking them with number one, two, &c., and the plants will, by regular yearly treatment, become habituated to bloom satisfactorily at the desired period. This charming tribe of plants will amply repay for any attention, and during the period of flowering can be kept in a warm sitting-room, if desired. Nearly all the kinds may be procured at the nurseries very cheap.

GROOM'S DR. HORNER TULIP.

This very superb *Bizarre Tulip* is a seedling raised and broke by Mr. Groom, florist, of Clapham Rise, near London, and the price attached to it in his catalogue is one hundred guineas. This is a large sum; but so celebrated a cultivator would not affix such a price to it did not the flower, of its class, possess very superior properties to any predecessor.

The Tulip, it is said, was first introduced into England from Turkey, and was named *Tulipa* from the resemblance of its corolla to the eastern head-dress, called TULIPAM, or *turban;* and hence our name of TULIP. Moore alludes to the similarity of the *Tulip* to the *turban* in his "Lallah Rookh:"—

> "What triumph crowds the rich divan to-day
> With *turban'd* heads, of every hue and race,
> Bowing before that veiled and awful face,
> Like Tulip-beds, of different shape and dyes,
> Bending beneath th' invisible west wind's sighs."

The Tulip flower, so much admired in the eastern parts of the world on account of its splendour and variety, has, from time immemorial, been made the emblem by which a young Persian makes a declaration of love. Chardin tells us, [that when these young turbaned swains present a Tulip to their mistress, it is their intention to convey to her the idea that, like this flower, they have countenance all on fire, and a heart reduced to a live coal.

The Turks regard this flower with so much delight, that a *feast of Tulips* is celebrated annually in the grand seignor's seraglio. Vases of the purest crystal, filled with the gayest *Tulips,* are scattered over the scene, like the stars which look down upon them for number; galleries, amphitheatres, and pagodas are erected, and covered with lights that form garlands of emeralds, sapphires, rubies, and diamonds, entwined with lights that present to the imagination the sparkling of every jewel which nature has produced or art polished; showers of rose-water refresh the air, and the very tapers shed the most exquisite odours: the banks are covered with carpets, whose colours are as vivid as the clouds which surround the sun; pyramids of cooling fruits meet the eye at every turn, whilst innumerable birds of song, whose golden cages are suspended by strings of pearl, seem to mistake the scene for the arrival of Phœbus, and, being awoke by the delights of the feast, mix their warbling with the melodious sounds of the instruments, which seem touched by invisible musicians. In the centre of the seraglio a splendid pavilion shades the Sultan, who carelessly reposes on the skins of the most costly and curious animals, with all the Nobles of his court in their richest robes and shawls, seated at his feet to behold the winding dances of the lovely women of his court, in all the luxurious display of their light and sparkling attire, and who sometimes encircle and at others glide around the vases of Tulips, whose beauty they celebrate in song and action.

We are not able to discover any mention of the Tulip in the works of Pliny, which induces us to think that it is *not an indigenous plant of the Levant,* but that it was introduced from Persia and other eastern parts in later days; and that it has since so naturalized itself as to appear like an indigenous plant, for the climate allows the Tulip to propagate itself by seed in the neighbourhood of the Levant, and it is *not extraordinary* to find it growing wild, as it does, in the vicinity of Constantinople.

In 1554 Auger Gislen Busbequius, being at the Porte as ambassador from the emperor of Germany, sent seeds and bulbs of the Tulip to Vienna, and in his letter states, "the Turks charged a high price for these flowers," which would not have been the case had they been growing wild in that country. *Busbequius*, going to France, left his Tulip bulbs under the care of Clusius, the celebrated botanist of Arras, who, thinking them old and withered, committed them to the rubbish-heap; but to his astonishment they produced a great variety of flowers. Clusius afterward gave more than a hundred of the bulbs to an apothecary at Vienna to be preserved in sugar, as is done with the roots of the Orchis, in order to ascertain whether they had not the same properties. In 1562, a merchant of Antwerp had a cargo of Tulip bulbs; and taking them for a sort of onion, ordered some to be roasted under embers, and ate them with oil and vinegar like common onious; the rest he set in the garden among the cabbages.

It is related that a sailor having taken some goods to a Dutch merchant, had a herring given him for breakfast; but seeing what he supposed a kind of onions lying on the counter, the tar took up a handful and ate with his dried fish, this sauce being of immense value.

Conrad Gesner, who has been denominated the Pliny of Germany, tells us that he first saw the TULIP in the year 1559, in the garden of John Henry Harwart, at Augsburg. Gesner had it *figured*, and published observations upon it in his works; and in consequence the common Tulip has very properly been named *Tulipa Gesneriana.*

Gerard fixes the introduction of the Tulip into England in 1577; and it was cultivated in his garden and those of his friends, Master Garth and Master James Garret. He states, "We have one of great beautie, and very much desired of all, with white flowers, dasht on the back side with a light wash of watchet colour. There is also another of a snow *white* colour, the edges slightly washt over with a little of what we call *blush* colour. We have another like the former, saving that this flower is of a *straw* colour."

During the sixteenth century the rage for flowers, especially the Tulip, was carried to great excess in Holland and France, and the growth and sale of Tulips became a trade of importance, and finally became a gambling system. In 1636, the spirit of floral gambling was carried to such excess at Haarlem, that during three years it yielded to that city a sum of ten millions sterling. Betting to a ruinous amount was often made respecting the eventual superiority of promising seedling bulbs, and for the possessions of breeders of high merit, from which fine seedlings might be expected. A beautiful Tulip, named VICEROY, was sold for the following articles:—Four fat oxen, twelve fat sheep, eight fat swine, two lasts of wheat, four lasts of rye, two hogsheads of wine, four tons of beer, two tons of butter, one thousand pounds of cheese, one complete bed, one suit of clothes, and one silver beaker: the value of which was 460*l.* Soon after another was sold, named Semper Augustus, for 846*l.*, a beautiful new carriage, and two horses with harness. Another of this variety was sold for 2,520*l.* Soon afterwards another superior flower was introduced to notice, and purchased for twelve acres of land and 5,000*l.* When a bidder could not be found to offer a sum equal to the supposed merits of a fine flower of this latter recorded variety, it was then disposed of by lottery or raffle. We are told of a person who possessed a very fine Tulip; but finding there was a second bulb of the same nature in Haarlem, he repaired to that place, and after having purchased it at an enormous price, placed it on a flagstone, and pounded it to a mummy with his foot, exclaiming with exultation, "Now my Tulip is unique." In another instance a Dutch gentleman having an income of 11,000*l.* per annum, purchased Tulips to such an extent, that, in less than one year, by his floral gambling, he reduced himself to beggary. This led the Dutch Government at length to issue a proclamation to suppress this ruinous course.

In Paris the prices given were nearly as extravagant as in Germany, but did not require the interposition of Government. The greatest rage for Tulips in England was from the middle of the seventeenth century (1650) to nearly the middle of the eighteenth; but it was carried on with more caution and moderation than in the continental countries, though as much as 500*l.* each was the price of some of the finest flowers. About 1740 an extensive taste for botany commenced, and the procuring of new exotic plants, as well as hardy shrubs, herbaceous plants, &c., from foreign countries was eagerly pursued. This led to a decline of the Tulip mania. Still, however, the taste for its cultivation is very extensive, both in our own country and Holland, and for flowers of superior merits the cultivators in England far exceed those of any other country; and we believe Mr. Groom possesses the most extensive collection of superb varieties of any Tulip-grower. One bed, which comprises his best varieties, usually contains 2,000 Tulips, besides which he has an immense quantity. All admirers of this beautiful tribe of flowers should visit his establishment when his stock is in bloom.

Several excellent articles on the culture of Tulips have already appeared in this Magazine. We refer our readers to the part,* rather than insert particulars here. The Tulip we now figure, Dr. Horner, is what is termed "a light feathered bizarre, having a slender beam down the centre of each petal, of excellent form and pure colour."

Seedlings, generally, when they first bloom, are without stripes or markings, a yellow or white bottom, and all the *upright* portion of the petals are self-coloured, a brown, red, rose, purple, scarlet, &c. In this state most continue for several years without variegation, and are termed BREEDERS.† Eventually they *break* (as it is termed) into stripes, and they take their stand according to the merit of their respective properties. They are usually divided into four classes: ROSES, which have *white* grounds, with various shades of red; BIZARRES, which have *yellow* grounds, with any dark colour for their markings; and BYBLOMENS, which have *white* grounds, with lilac, black, and purple for their markings; and TRICOLORS are those that have three or more colours intermixed. These are not allowed as show flowers.

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* See Volume for 1850, by Dahl.

† During these years most of the breeders produce an increase, and the young bulbs being taken from the parent one, planted annually, &c. by the time that the flower of the parent bulb *breaks*, there is a number of its progeny. These young breeder bulbs are sometimes offered for sale, prior to the original bulb having broke. Persons desirous of purchasing such may generally be supplied by the Tulip growers in the trade.

The disposition of the darker colours upon the white or yellow grounds are again made the distinguishing characteristics to bring the flowers into sections, and are termed, 1st, flamed; 2nd, feathered; and, 3rd, flamed and feathered on the same flower. The *flame* is a direct stripe or blotch up the *centre* of each petal. The *feather* is fine streaks on the *edges* of each petal. They are again termed light or heavy feather or flame, according to broad or narrow portion of the deeper colours. A flower having an unbroken feather, *without any flame*, is a *true* feathered flower. And a writer in the "Midland Florist" says, "Why should not a *flamed flower* be correct, indeed *only correct*, when it is *without any feather?* It has been the custom to term flowers *flamed* when they had that peculiar marking up the centre, and *with* or *without* a *feathered* edge." But the writer adds, "Why should not a *flamed flower* be correct, indeed only correct, *without any feather?*" He suggests further that those flowers which have *feather and flame* be identified as a distinct section, so that in future the distinction should be, 1st, feathered; 2nd, flamed; 3rd, flamed and feathered. This suggestion is precisely what our respected correspondent Dahl states, in his Letter No. 1, on Tulips, which is given at page 15, January Number, 1850, was the system in use at that time. Certainly it ought to be the standing universal rule in all exhibitions of this lovely tribe of flowers. The confusion and disputing that has long existed on this latter particular has induced us to give at length the remarks on the distinctions, hoping such disputations will not occur in future to interrupt the harmony which at all times ought to exist with florists, and especially so at their festive exhibitions.

NOTES ON NEW OR RARE PLANTS.

Abelia rupestris.—A small deciduous spreading shrub, with white flowers about half an inch long, and somewhat like the Honeysuckle. It is a native of the Chamoo Hills, in China, where it is found growing amongst the rocks. It is a pretty greenhouse plant, growing and flowering freely. It is sweet-scented, and keeps in flower for a length of time.—(*Paxton's Flower Garden*, No. 400.)

Araucaria Cookii.—This is a large growing greenhouse species, a native of New Caledonia, in the South Pacific, a plant of which is in the Horticultural Society's Garden at Chiswick. It has somewhat the appearance of *A. excelsa*, but more compact when old, and less stiff and more graceful when young. There are large forests of it in New Caledonia, and Captain Cook, the navigator, makes mention of the first plant of it in his account of New Caledonia, as having an elevation like a tower; this still stands, and is in a flourishing condition. Its appearance *now* is exactly that of a well-proportioned factory chimney of great height.

Capsicum cereolum.—Introduced by Mr. Lobb, from the west coast of South America, to the establishment of Messrs. Veitch and Son, of Exeter. It is a half-shrubby greenhouse plant, with *bright* *yellow* conical fruit, which contrasts well with the lively green foliage; and its fruiting during the summer and autumn renders it a very desirable plant for the greenhouse.—(*Paxton's Flower Garden*, No. 402.)

CENTROSOLENIA PICTA.—A creeping succulent stove plant, with handsome painted and blotched foliage, flowers nearly white, about two inches long, tubular. It was introduced by Mr. Spruce from the banks of the river Amazon, in the tropical part of South America, who sent it to the Royal Botanic Gardens at Kew.—(Figured in *Bot. Mag.*, 4611.)

COTONEASTER THYMIFOLIA.—A pretty little evergreen prostrate shrub, about half the size of C. microphylla, with red fruit, very suitable for rockwork. Introduced to France from Gossaire Than, in Nepal.—(*Paxton's Flower Garden*, No. 405.)

DENDROBIUM GIBSONI.—Introduced by Mr. Gibbs from India to the Duke of Devonshire's establishment at Chatsworth, where it flowered last September. The flowers are produced in a pendant raceme; each blossom is about an inch and a half across, of a rich apricot-yellow, with a purple blotch on the lip. One of the finest of the yellow species.—(*Paxton's Flower Garden*, No. 406.)

FITZ-ROYA PATAGONICA.—A splendid hardy coniferous tree, introduced first by Captain Robert Fitz-Roy, of Her Majesty's ship Beagle, and since it has been sent by Mr. Lobb from Patagonia to Messrs. Veitch's nursery, where it is now growing in the open ground. The twigs are covered with small scaly leaves, about a quarter of an inch long, bright green. It produces cones (of a greenish-yellow colour) abundantly from very young plants.—(Figured in *Bot. Mag.*, 4616.)

LAPAGERIA ROSEA.—We figured this most beautiful flowering plant in our Magazine for 1850. Its blooming this season has more than realized all that was stated relative to it. It is a large climbing plant, and in its native country, Chili, it scrambles over bushes in the woods, producing a profusion of its large bell-shaped (as large as a Tulip) brilliant rosy-red, speckled with white, blossoms. It flourishes in the conservatory or greenhouse, having free root room. Mr. Lobb, Messrs. Veitch's collector, states, that " the climate of Chili is much like that of Cornwall, in England. Frost often occurs in winter, but is of short duration. Summer is also wet and cold, the thermometer seldom rising beyond sixty-five degrees; but although frost is not so severe, the south winds are very cutting, and I am inclined to think that, if anything be required, it will be sheltered situations for those that inhabit low grounds near the sea."

MIMOSA URUGUENSIS.—The Hon. W. F. Strangways obtained this pretty flowering shrub from Buenos Ayres. It is about as hardy as the general mass of New Holland Acacias. It has been in the Horticultural Society's garden at Chiswick for several years, where it blooms freely in the open borders during summer and autumn, and is very ornamental. The flowers are in size and form very like those of the *Humble-plant*, and of brick-red colour. Its blossoms, in contrast with its *finely* divided shining delicate foliage, have a very pretty effect. It is nearly a hardy shrub, and ought to be tried in every likely garden or ground.

PLATYCODON CHINENSE.—Mr. Fortune brought this handsome (Campanula) flowering plant from Chamoo, in China. Dr. Lindley observes, "At first we took it for a mere variety of Platycodon grandiflora (Campanula grandiflora of some), originally from *Siberia*. This latter species has usually but one flower at the end of the stem, or at most two; on the contrary the P. chinense *always* has a *long raceme*, and will sometimes have branches. It is the finest herbaceous plant Mr. Fortune sent from China to the Horticultural Society. It is nearly hardy, but in cold situations requires to be kept in a cold frame in winter. The flower stems rise from two to three feet high, bearing a profusion of flowers. Each blossom is two inches across, of a deep blue colour. The leaves are green above, but of a silvery hue beneath, oval shaped, finely serrated. It deserves a place in every flower border. There is a semi-double white variety, figured in the *Journal of the Horticultural Society*.

POTENTILLA AMBIGUA. THREE TOOTHED.—Dr. Hooker found this pretty species growing at Sikkim-Himalaya, in woods at an elevation of from 12,000 to 13,000 feet above the level of the sea. From a woody perennial root numerous *stems* diverge around, and they rise from six to twelve inches high, frequently of a purple colour, but the *leaves* are green. The contrast is pretty, more especially so when the rich yellow flowers are full blown, each being an inch across. It is a free growing plant, increasing rapidly, rooting like some of the creeping Verbenas. It blooms all the summer and up to late in autumn. It is in the Royal Gardens of Kew, and deserves a place in every flower garden, either as a border ornament in patches, edging for a bed, or on a rock work. (Figured in *Bot. Mag.*, 4613.)

PRIMULA INVOLUCRATA.—A native of Northern-India, a hardy perennial herbaceous plant. The flower-scape rises from six to nine inches high, bearing three or four white blossoms, each being about an inch across, fragrant. It is a desirable plant for rockwork, not too much exposed to sun. It blooms in the open border about March, but earlier if kept in a cool greenhouse, or pit frame: it is in the Chiswick Garden. A very pretty addition to this lovely tribe of early flowers.—(*Journal of Horticultural Society.*)

SPHÆROSTEMA PROPINQUUM.—Dr. Hooker found this handsome somewhat climbing shrub growing at from 7,000 to 9,000 feet in Sikkim-Himalaya. It is a much branching, twiggy plant, its leaves being much like the common Syringa for size and form, but quite smooth. It is fragrant, and the natives eat the fruit, which consists of many berries, which, when ripe, resembles a long bunch of red currants. The flowers have fine petals, nearly an inch across, of a pale yellow colour. It flourishes in the palm stove at the Royal Gardens of Kew, but will succeed in a warm greenhouse.—(Figured in *Magazine of Botany*, 4614.)

Vaccinium Rollissonii. Rollisson's Whortleberry.—Messrs. Rollissons' collector discovered this handsome flowering plant growing on the lava of the "silent volcanoes" of Java, on the highest land in the island. It is a neat evergreen shrub, growing two feet high, numerously branched. Each leaf is about the size and form of our common shrubby box. The flowers are produced in short terminal racemes, the blossoms drooping, the tube of each being about half an inch long, and tapering to the end, similar to some of the Cape heaths of the ventricose varieties, and of a rich scarlet colour. It is a valuable acquisition. Requires to be grown in the greenhouse, but in summer may be placed out doors, in a somewhat shady place.—(Figured in *Bot. Mag.*, 4612.)

Showy Plants now in bloom.

Epacris albida compacta.—The flowers are pure white, bell-shaped, an inch long. A very handsome variety, and deserves to be in every greenhouse.

Epacris limatus.—The tube is an inch long, a bright pink, with the end a pure white. The contrast is exceedingly beautiful. It ought to be in every greenhouse.

Epacris sanguinea.—Tube an inch long, of a deep blood-red. It is very handsome, and its deep rich colour renders it highly ornamental. It should be in every collection.

Epacris campanulata rubra.—The flowers are bell-shaped, half an inch long, a pretty rosy-red colour.

Epacris campanulata rosea.—The flowers are bell-shaped, half an inch long, and of a beautiful delicate rose colour. It ought to be in every greenhouse.

Epacris nivea.—Flowers bell-shaped, half an inch long, white. Neat and pretty.

Epacris miniata.—Tube one inch long, a light scarlet, with the end pure white.

Epacris hyacinthiflora.—Tube wide, nearly an inch long, a beautiful bright blush colour. Very handsome.

Epacris alba compacta.—Tube about three-quarters of an inch long, widish, a pure white. Very beautiful, and borne in profusion.

Epacris onosmaflora.—Flower bell-shaped, near half an inch long, white tinged with green. The plant is of stiff growing habit.

Epacris obtusifolia.—Leaves short and stiff. Flowers broad, mouth funnel form, white, with a rose tinge.

Epacris impressa.—Tube three parts of an inch long, and a bright flesh colour. Very pretty.

Bossiæa virgata.—Leaves small and neat. The pretty pea-formed flowers are yellow, with a bright crimson eye-like centre. It blooms in profusion, and deserves to be in every greenhouse.

Many of the lovely Acacias are coming into bloom, and will be beautiful and fragrant for several months. The following are particularly handsome, and highly merit a place in every greenhouse or conservatory :—

Acacia trinervata.—The leaves are narrow and an inch long. It is a handsome bushy plant. Flowers a pale yellow, delicate and pretty.

Acacia rotundifolia.—The leaves are circular, a quarter of an inch across. It is a very neat bushy plant, the flowers are a bright yellow colour, and produced in profusion. It is very neat and beautiful.

Acacia vestita.—The leaves are half an inch long. It is a very neat bushy plant. The flowers are borne in large branching spikes, and along them the blossoms are produced in short racemes of ten or twelve in each. They are a pretty light yellow colour. It is a handsome species.

Acacia præmorsa.—The leaves are short, and the plant forms a pretty bush, blooming very profusely, flowers a rich yellow. Very pretty.

Acacia lineata.—The leaves are near an inch long, narrow. The plant is bushy and neat. The flowers are produced in profusion, and of a rich golden yellow colour. It is exceedingly handsome.

Acacia dentifera.—The leaves are four inches long, very narrow. It forms a neat branching bush. The flowers are a rich deep yellow colour, and the globular heads large. It is a very beautiful species.

Acacia ovata.—The leaves are oval-shaped, half an inch across. It is a very neat bushy plant. The flowers are produced in long spikes, and are a rich yellow colour. It is a very handsome species.

Acacia leptoreura.—Leaves like a thinly foliaged Pinus, about three inches long. The flowers are a deep yellow. It is singularly pretty.

Poinsettia pulcherrima.—The leaves are something in the shape of the Tulip-tree, of a dark green, pretty. The end of each main shoot terminates in a crown of large rich crimson leaves (bracts) and are exceedingly ornamental, enduring through winter. Two or three placed among a collection of other plants have a fine effect. It may be easily brought into bloom in a hot-bed frame, warm pit, or stove, and then be taken into the greenhouse, or sitting-room, to display its splendour.

Euphorbia Jacquiniflora.—We have on former occasions noticed this very beautiful flowering plant, its long racemes of rich orange-scarlet flowers, each about the size of a fourpenny piece, produce a charming appearance. It may be treated the same as the Poinsettia above noticed. Both plants ought to be in every collection of autumn and winter blooming plants, and may be had cheap at the nurseries. Double White and Red Chinese Primroses are fine things for autumn and winter; every greenhouse, or sitting-room, should have them. They are cheap too.

Erica mammosa.—The flowers are an inch long, red; E. mammosa superba, orange-scarlet; and E. mammosa pallida, rosy-pink and white. These bloom freely in autumn and winter, and well worth a place in the greenhouse.

Erica caffra.—Small white flowers, sweet, produced most profusely. E. gracilis, bright purple, small flowers, but borne in profusion. These are excellent autumn and winter bloomers, appearing one mass of flowers, they are much admired, and valuable for ornamenting an entrance room; persons who engage to supply flowering plants for the year, as many about London do, find these plants very useful. They are cheap. E. Linnæoides superba is now a most beautiful ornament, white and rosy-purple.

Minima Chrysanthemums.—We have previously stated that this new class of Chrysanthemums bloom best the second season. The plants which were struck in the summer of 1850, and have been encouraged in growth this season, are now around London in fine bloom; they are exceedingly handsome, some of them very like the best and neatest of the Double Daisies. Every greenhouse and sitting-room ought to have some.

The following flowers are now exhibited in bouquets, or single cut specimens, we give the list that our readers may know that such showy flowers can now be brought into bloom, and nearly all the kinds may be had in bloom through winter and spring:—

Gesnera zebrina, Bignonia venusta, Double Red and Double White Chinese Primroses, the Single also. Coronilla glauca, Corræa speciosa, Acacia armata, Combretum grandiflorum, Cinerareas, Camellias, Cactus truncatus, Amaryllis Johnsonii, Luculia gratissima, Lantana miniata, mixta, and crocea. Various scarlet Geraniums, Azalea indica, the white and several others; the handsome Euphorbia Jacquiniflora, Erica caffra, Linnæoides, gracilis, and the mammosa alba, mammosa rosea, Double Violets, Fuchsias, Rondoletia speciosa major, Mignonette, Nerium Oleander, Gardenia radicans, Hemimeris, Plumbago rosea, Torenia asiatica, Achimenes picta, Chrysanthemums in profusion. Three kinds of Heliotropes, Sweet Cyclamens, Roses, Tea scented; Lily of the Valley, Begonias, Salvia speciosa, oppositifolia, gesneriflora, and Cuphea platycentra.

"THE HYACINTH."

"Hyacinth, with sapphire bell,
Curling backward."

"Some deep empurpled ———,
Some as the Rubin laughing sweetly red,
Some like fair Emeraudes not yet well ripened."

Had the oriental Hyacinth been disregarded by the poets, it could not have failed claiming our notice and admiration by its extreme delicacy of colouring, elegance of form, and delightful fragrance, which fits it alike for the garden of choicest plants, or the vase of odorous flowers. Hence, no wonder that Phœbus became enamoured with its beauty, and Zephyrs sighed to enjoy its sweet breath; that our artists should invent glasses for the bulbs, and our fair countrywomen should foster them with such care in their saloons.

The Hyacinth may be considered as supreme amongst the flowers of the spring as the Rose is amongst those of the summer, and its charms have rendered it a successful rival to the Tulip even in the hearts of the Dutch florists. It is a native of the Levant, and grows abundantly about Aleppo and Bagdat, where it flowers naturally in February. Lepechin found it in Russia, not only with purple corollas, but with yellow flowers also. These beautiful flowers appear to have been common in our gardens prior to 1597, as Gerard does not mention them as being rare in his time; but observes, "These kinds of Jacints have been brought from beyond the seas, some out of one countrey, and some out of others, especially from the east countries, whereof they tooke their names *Orientalis*."

It is probable that these bulbs and many seeds of eastern plants were brought to this country during the early part of the reign of Elizabeth, as we find that about the year 1561 she enabled Anthonie Jenkinson and others to visit Persia on a trading speculation in raw silk, &c., and in which they eventually succeeded; and Monsieur de Thou remarks, that this company of the English also obtained the exclusive privilege of importing all manner of foreign commodities into Russia, and by this support they were encouraged to visit the several provinces of the east more carefully than other nations could do.

The cultivation of Hyacinths receives more attention, and is in higher estimation with Dutch florists at present, than that of Tulips. The Hyacinth is certainly a very superior kind of flower to the Tulip; but we presume that the great attention given to it by the Dutch is owing to the increased demand from London and Paris, where the roots are sent in large quantities, and where, from our own observations, we conclude that nearly three-fourths of the bulbs that are imported are lost through carelessness after they have once flowered, particularly those that are grown in glasses.

It is calculated that more than a hundred English acres are occupied for rearing bulbous plants, principally Hyacinths, near the village of Overveen, in the neighbourhood of Haarlem, where the best growers keep about 50,000 bulbs as breeders, and these florists now enumerate upwards of 2,000 varieties of the Hyacinth. The list of one florist at Haarlem enumerates more than 800 kinds of double-flowered Hyacinths, besides about 400 varieties of the single kind.

Peter Voerhelm was one of the earliest cultivators of the Double Hyacinth, which was about the beginning of the last century. Previously to his time the single kind only had been propagated. This florist named his first Double Hyacinth Mary; but the kind is now lost, and his third double flower was called the King of Great Britain, and this is now the oldest Double Hyacinth known, a single bulb of which used to bring the price of a thousand florins, or one hundred pounds sterling; and about seventy years back two hundred pounds was no uncommon price for a single bulb of a favourite Hyacinth. At present about ten pounds is the general price given for the finest bulbs, and from one to ten shillings for the varied sorts; what are called the common mixtures are sold from one to two pounds a hundred.

The criterion of a fine Double Hyacinth consists in its stem being strong, tall, and erect, garnished with numerous and large bells, each supported by a short and strong peduncle, or footstalk, in a horizontal position, so that the whole may have a compact pyramidical form, with the upper flower perfectly erect. The flowers should be large, and perfectly double: that is, well filled with broad bold petals, appearing rather convex than flat or hollow. The flowers should occupy about one-half the length of the stem. The colours should be clear and bright, whether plain yellow, red, blue, or white, or variously intermixed and diversified in the eye, which is thought to give additional lustre and elegance to the Hyacinth. Strong bright colours are in greater request, and bear a higher price than such as are pale. Under bad treatment good Hyacinths will degenerate in two or three years; but in Holland they have been preserved perfect for nearly a century.

Everybody knows that the bulb of the common onion is exhausted by its flower stem, and that when it has performed its oviparous duties, as ordained by Nature, there are no remains of the bulb left. Not so with the Hyacinth; there Nature works in a more complicated manner, for whilst the stem is sent out of the earth to form its seed, the bulb is forming a new germ or bud within the next coat or circle of the lamina; and thus, whilst the flower stem is exhausting the old germ or heart of the bulb, a regeneration is taking place within the body for the succeeding year; nor is this all, for as the Hyacinth possesses a viviparous nature also, it throws off perfect plants from its side beneath the earth.

Who can look into these mysterious works of Nature without having his mind enlightened, and his admiration increased towards the Omnipotent Being,

> ———————— " Whose sun exalts
> Whose breath perfumes, and whose pencil paints
> The Hyacinth."

Some varieties of the Hyacinth do not so readily throw off young bulbs as others, but require all the nourishment to form their flowers, and support the seed vessels. In this case a simple expedient is resorted to, if the variety be scarce and valuable. The base of the bulb is slightly cut or notched in three or four places, which hinders the plant from exhausting itself in the production of a flower stem, and at the same time induces a tendency in the bulb to throw out off-sets at the wounded places, and these off-sets soon become independent plants, with all the character of the parent bulb.

To raise Hyacinths from seed is doubly desirous, as it increases the quantity and also the variety of this admired flower. Plants that have a strong and straight stem, and a regular and well-formed pyramid of bells that are semi-double, should be selected for seed. They should not be gathered till they have become perfectly black and ripe, at which time the pericarpium will appear yellow on the outside, and will begin to open. The stem, with which the seed is connected, is then to be cut off, and placed in a dry airy situation, but not in the sun, where it may remain until the time of sowing, which is either about the end of October or the beginning of March. The seeds should be sown in pots or boxes filled with compost, as will be described. The seeds should be as regularly sown as possible, and then covered with the compost about half an inch thick. These pots or boxes should be placed in a warm situation for the winter. They will never require water or other attention, excepting to keep the boxes free from weeds and the frost. At the approach of the second winter an additional stratum of about half an inch of the compost must be spread over the pots or boxes, and about the middle of July in the third year the bulbs may be taken up, dried, and treated in the same manner as old bulbs or off-sets. Some of the bulbs may be expected to flower in the fourth year, and others in the fifth and sixth, according to their strength. The Dutch florists consider it a successful sowing if they procure four or six good varieties out of each thousand bulbs so raised. Maddock says we must be content if we find one flower in five hundred deserving a name or place in a curious collection; but for ourselves we should prefer seeing the four hundred and ninety-nine common varieties flowering at one time on our parterre, than a single plant of the most curious variety; not but that we would wish them all to be of the best kinds if possible, but in Hyacinths, as in Violets, we covet quantity, both to gratify the sight and the smell. Those for the house, or that are intended to be sheltered by awnings, should be of the most curious kinds, whilst those of least attractions may form clumps in the open borders, but where they are in some degree screened by shrubs or taller plants.

Off-sets will bloom the second year, and tolerably strong the third, if properly treated. They may be planted soon after they are taken from the old bulbs, and it is desirable to form a separate bed for these young bulbs, and which should be in an open part of the garden that is screened from the north and eastern winds. The bed should be a few inches above the common level of the garden, so that superfluous moisture may run off, and for this end it is advised that the beds be formed of a rounding or convex shape. The bulbs should be covered about two inches deep with the compost.

The compost most esteemed at Haarlem for growing Hyacinths consists of pure white sand, rotted leaves of trees, fine peat earth, and a small proportion of thoroughly rotted cow-dung, and this prepared soil is renewed annually after the bulbs are lifted in summer. The compost in which they grew is removed to the depth of about nine inches, and the sub soil is digged over; a new layer of compost of equal depth is afterwards introduced; and in this the choice bulbs are again planted in the autumn. The compost in which the Hyacinths grew descends the following year, first to the Tulips, and then to the Narcissus, &c., so as to give them all a regular change of soil, adding more cow-dung or more sand to the compost, as the nature of the succeeding plants may require,

From the middle of October to the middle of November is the best time for placing the Hyacinths' bulbs in the ground, for when planted earlier they appear above the ground in the middle of winter; and if neglected later, the bulbs will be weakened by their natural tendency to vegetate. The bulbs may be placed from six to nine inches apart, and it is advisable to place a small quantity of sand beneath each bulb, to prevent the earth adhering too closely to them.

It is the practice to plant Hyacinths alternately on the beds according to their colours; but when they are planted in the flower-garden, or on the projecting borders of the shrubbery, they will be found to have a much better effect when clumps are formed of distinct colours.

The principal Hyacinth-growers in Holland take up their bulbs about a month after bloom, or as soon as the plants begin to appear yellow and decayed. They then cut off the stem and the foliage close to the bulb, or within about half an inch of it, but leave the fibrous roots attached to the bulb; the bulbs are then placed on the same beds on their sides, with the points towards the north. They are then covered with dry earth or sand, about half an inch thick, in the form of a ridge or cone; and in this state they are left to dry or ripen gradually for about three weeks. They are then taken up, and their fibres gently rubbed off, after which they are laid in a dry room for a few days, and then cleared from soil or loose decayed coats, &c., and their off-sets separated. The bulbs are then placed in shallow drawers, where the air can circulate around them Some persons place them with the base of the bulb upwards; but the most material thing is to keep them from damp, and place them where there is a free circulation, as on a lattice shelf, or in open wicker-baskets, with little sticks across to separate each layer of bulbs; and these baskets may be suspended to the ceiling to keep them from vermin.

It has been ascertained that the Hyacinth will grow and flower in the water without sending out fibrous roots. In the year 1787, M. le Marquis de Gouffier exhibited to the Royal Society of Agriculture in Paris a glass, with the bulb of a Hyacinth turned the base upwards; in this state it sent down a stem and leaves into the water, but the bulb did not send out roots upwards; the leaves were very green, but the petals of the flowers, which should have been blue, were of a discoloured white. This experiment proves how much the foliage of plants has the power to assist in their growth, since they can even subsist without the aid of the root.

I have subjoined a descriptive list of a few of the best in each class, suited equally well both cultivated in glasses or pots:—

Six Double Red.

Bouquet royal, large rose, carmine eye.
Grootvorst, very large rose.
Lady Grafton, large striped carmine, green tips.
Lord Duncan, large rich pink.
Lord Wellington, largest rose.
Waterloo, deep carmine.

Six Double Blue.

Admiral of the blue, deep blue.
Duc de Normandie, blue, purple stripe.
Helicon, rich blue, extra fine.
Laurens Koster, violet, dark mottle.
Othello, splendid black.
Pasquin, light blue, dark eye.

Six Double White.

A la Mode, white, violet eye.
Anna Maria, white, purple eye.
Bride of Abydos, pure white.
Comtesse de Hollande, white, fine eye.

Six Single Red.

Henrietta Wilhelmina, rose, white stripes.
La Dame du Lac, shaded rose.
Le Franc de Berkhey, splendid rosy pink.
Princess Royal, deep rose.
Queen Victoria, rich crimson.
Temple of Apollo, rich flesh.

Six Single Blue.

Bonaparte, light blue, dark shade.
Francois, deep blue, white eye.
La Grande Védette, large pearl blue.
Nimrod, large bright light blue.
Tubal Cain, rich dark indigo.
William the First, large black.

Six Single White.

Duchess of Kent, French white.
Hercules, French white.
Madame de Talleyrand, pure white.
Vainqueur, pure white.

Don Gratuit, white, primrose eye.
Triomphe Blandina, wax-like white, carmine eye.
Reine de Hollande, large white, very fine.
Voltaire, large wax-like white.

Six Double Yellow.

Emperor of China, rich primrose.
Grand Monarque, pink eye.
La Belle Chinoise, new and splendid yellow.
La Belle Souffrée, large primrose.
La Favorite, orange.
La Grandeur, large citron, red eye.

Six Single Yellow.

Golden Branch, large truss.
Heroine, rich primrose.
Lord Brougham, fine chamois colour.
Prince d'Orange, fine yellow.
Sterne, very large citron.
Victor Hugo, extra rich yellow, new.

THE PROGRESS OF THE PELARGONIUM.

(*Continued from page* 275.)

BY ORION.

Having now reached the year 1848, a period so little removed from us, it would have been better, perhaps, to pause here, leaving it for some future time to take up the "continued progress," for such it evidently will be while we have so many gentlemen striving so earnestly to reach perfection; but in order to make the present series as complete as possible, a few notes up to the year 1851, so eventful for everything, may prove the best conclusion to these, perhaps rather too finely drawn out, remarks. 1848, then, gave us Beck's best batch (taking them "all in all"), *Centurion, *Cavalier, *Cruenta, Gustavus, *Gulielma, and Rosamond, each at a guinea and a-half, Cassandra, and *Honora, one guinea; also two "trade flowers" again, Blanche and Grandiflora, each at fifteen shillings, all contributed to make these flowers "the rage," so much so that we shall find for once Mr. Foster was compelled "to hide his diminished head." Mr. Lyne this year first introduced the celebrated Queen of Song, or rather of *light Pelargoniums*, Jenny Lind, at two guineas; also Mercury and Star of the West, each at a guinea and a-half. Mr. Gaines's *Salamander, at two guineas, proved to be a good acquisition among the high-coloured flowers. Oriflamme, at one guinea, in the same way, never attained the same popularity. Mr. Miller, of Ramsgate, made some stir in the floricultural world with some "grand novelties," which, had they at all resembled the plates published of them, would indeed have been "sought after;" but Flora's Flag, Distinctus, Rosa Mundi, Scarlet Defiance, *Queen of Kent, and some others, did not give that satisfaction to purchasers which their painted resemblances (?) had led purchasers to expect; and as no more appeared from the same source, it may be supposed that they did not "go down;" and yet they did *go down*, for they have never appeared on the "exhibition tables" since. Black Prince, raised by a Mr. Folley, and sent out by Mr. Rendle with Mr. Lyne's flowers, was well worthy the moderate sum of half a guinea; it was a beautiful flower, but its being of under size told against its getting much into cultivation. Mr. Foster's flowers this season were Bertha, Clarinda, Marian, at one guinea; Lucretia and Orpheus, each at two guineas, comprising little of any note. This gentleman seems about this time to have "rested from his labours," perhaps taking breath to accomplish a "greater stride," as he has since done, but changing gardeners may have had somewhat to do with the apparent mediocrity of flowers raised by him about this period. Anacreon, Cunard, Nitidum, Phœbus, and Pictum, all at one guinea each, owed their origin to Mr. Garth; but these, like Mr. Foster's flowers, all "paled their fires," contrasted with Mr. Beck's and Mr. Lyne's new strain of this rapidly increasing popular flower. Mr. Cock had one, Melpomene, at one guinea. A nice bright variety, named Mrs. Brock, also at one guinea, was first sent out. Mr. Hoyle, it seems, made a stand this year, but only to come out the following season with renewed vigour. Mr. Beck having now fairly "entered the lists," it is only doing him justice to state that his flowers generally possessed "stoutness of petal," one quality which ought never to be dispensed with; "good growing habits," very desirable to exhibitors; "freedom of bloom;" and, lastly, a "general constancy," that is, few, if any, "sporting."

To resume progress: as just stated, Mr. Hoyle "made up" a formidable array of celebrated names in 1849. *Crusader, at two guineas, heads the list; and who that has grown this beautiful variety will not agree in saying, "What a pity it is such a fine flower should possess such a weak 'running habit?'" in consequence of which it never has been an exhibition flower, but its popularity is still great. Abd-el-Kader, Belle of the Village, *President, Rolla, *Sparkler, and Terpsichore, each at one guinea, are all beautiful things in general. Sparkler, however, proved to be a "racer," being always given to "sporting." The same raiser's Flamingo, Prometheus, and *Superlative, with some others, at fifteen shillings, go towards making-up a good long dozen. Topping's *Brilliant must here be mentioned as being exhibited successfully many times; it soon became the *rage*, and, as a fine large scarlet flower, it stands at present unrivalled; the price was two guineas, which did not prevent its getting into pretty general cultivation; but it was soon discovered that, noble flower as it is, it would never be what is termed suitable for exhibition purposes, being, like Crusader and some others, of "uneven habit." A good dark variety, named Elegans, at one guinea, quite a novelty indeed, and another very dark flower, Rebecca, at half a guinea, both raised by Mr. Topping, with the beautiful Virgin Queen (sent out by Mr. Rendle at thirty shillings), all coming from the "west of England," showed that there were many "good men and true" rendering much service to that progress here undertaken to chronicle. Mr. Story sent out, through Mr. Beck, his pair of Mont Blancs, *No. 1 and No. 2, for a guinea and a-half. No. 1 was the best, but has failed to displace "*Pearl*," perhaps from its having a bad habit. Mr. Beck's own flowers this year were, *Delicatissimum (very beautiful, but, alas, with a bad weak habit), Emilia, Princess, Refulgent, Sundown, *Star, and Symmetry, each at one guinea. Mr. Beck was tempted to let out also a "fancy" notched variety, called *Harlequin, at fifteen shillings, about which the less said the better. Mr. Foster's, without being anything very striking, served to keep his name before the public: ALONZO, ARMADA-SUPERB, LAMARTINE, LALLA ROOKH, ONDINE, NORAH, PHYLLIS, and VICTORY were the principal. Mr. Whomes, late gardener to Mr. Foster, gave the world some novelties; foremost was WINDSOR CASTLE, at one guinea, really a handsome flower, but approaching the "fancy" class too much; QUEEN VICTORIA, also one guinea, if it had the constancy of its namesake would have been an acquisition. It may here be remarked, that QUEEN VICTORIA flowers have often appeared on plants of WINDSOR CASTLE; so, perhaps, both derived their origin from the said seed-pod. Mr. Gaines's ASPASIA and *MELEAGER, each at two guineas, were passably good, and complete the list for this year.

To those who grow the above-named flowers (for few are yet discarded), it would be superfluous here to enlarge on their respective merits; but for the information of those who are not growers of them, it may be stated that the varieties which showed the greatest amount of progress were CRUSADER, BRILLIANT, and DELICATISSIMUM. The principal feature of this year, however, was the Seedling Pelargonium Exhibition held at Upton Park, near Windsor, and which has been continued (under improved management) elsewhere since. The results of this gathering together must be introduced under the year 1850, to which period we are now arrived. Mr. Foster must be mentioned first, as his flower, *GIPSY BRIDE, distanced all others, though from its *being small*, and of a terribly bad weak habit, it has disappointed many anxious purchasers; but for their consolation it may be safely asserted, that when an average-sized flower *is* obtained it has the most good points (of course only the bloom is here meant) of any variety yet raised, and until another *larger and better one* is produced, may be considered the "standard of perfection" hitherto reached. But this is only an illustration of what remains to be yet accomplished. The best flower yet raised is of under average size, and bears the character of being one of the worst to cultivate. Mr. Foster's other flowers were *CONSTANCE, CONSPICUUM, NARCISSUS, ARMADA IMPROVED, and ALDERMAN: the latter was sent out as Black's, that being Mr. Foster's gardener's name. It should be noted that to Mr. Bragg, of Slough, was entrusted the letting of them out, which he did for the first time at very moderate prices; but the stock of GIPSY BRIDE being small, two guineas was the sum fixed for it. The next flower to be mentioned must be the one which obtained the second prize at Upton Park, Major Foquet's *MAGNIFICENT; and if the award was to have been for the best flower, taken "all in all" must have been placed first. This variety, now become so popular, was sent out by the raiser! a circumstance which must have prevented a large "first year's" sale: the price advertised was two guineas. The third-placed flower was *FIELD MARSHAL, another west of England gentleman's production, Mr. Symons, Messrs. Veitch of Exeter, sent it out at a guinea and a-half; Mr. Beck's CUYP, *EMILY, GOVERNOR, *LOVELINESS, PAINTER, PET, and *ROSALIND; all more or less contributed to keep up this raiser's reputation. The same cannot be said of CLOWN and SINGULARITY, two more notched *ugly* varieties, after the style of HARLEQUIN. From the circumstance of no more of these varieties appearing since, we may infer that they did not "go down," and it had been better, perhaps, if they had never been "sent out." A few more good flowers must be hastily mentioned. Mr. Bragg's FALSTAFF, not by any means faultless, has proved a first-rate stage and exhibition flower. Mr. Hoyle's *PRINCE OF ORANGE stands unrivalled for brightness of colour; and his *CHRISTABEL, CRISPINA, LORD STANLEY, LORD GOUGH, NANDEE, *NONSUCH (evidently only the precursor of the renowned OCCELLATUM), and *SATISFACTION are mostly beautiful productions, though, from some cause or other, they have not appeared on the exhibition tables. Mr. Gaines's ELECTRA, THE MOOR, *FLYING DUTCHMAN (of splendid form), PRINCESS HELENA, and GRENADIER, with Turner's ROWENA, Walton's ANTAGONIST, Stones's CORREGIO, Cock's SIKH, and Walker's PURITY, complete a list, of which it may be said nearly all have proved themselves to be good acquisitions. And here our progress must of necessity end. It would be premature to criticise AJAX, ALIBI, and a bright galaxy of as yet untried beautiful flowers, for sufficient time has not yet elapsed for them to have got into general cultivation; that they are worthy of being so is proved by their occupying such high places at the various exhibitions as seedlings; and when another season or two has passed away they may occasion another article to be written, perhaps from the hand by which these random recollections have been thus brought to a close. In writing adieus it is to be hoped that nothing has appeared to give offence to any parties; if errors or omissions have been committed, it has been simply in ignorance, and excuses are begged for them; and "ORION" here ventures to hope that this may not be the last time he shall have the pleasure of giving "the Progress of the Pelargonium."

(A history of this extensive and justly popular flower was very desirable; and our respected correspondent has our sincere thanks, and we think he is entitled, too, to the thanks of all admirers of Pelargoniums, for the faithful and interesting particulars which are contained in the papers which have been compiled; and we hope from year to year to be favoured by him with an annual continuation of "the Progress of the Pelargonium."—CONDUCTOR.)

ON CINERARIAS.

BY A LONDON AMATEUR GROWER.

I THINK this very extensive and lovely-blooming family of plants is not sufficiently brought before the readers of your Magazine, nor recommended as their merits entitle them to. I have grown a number of the best varieties, besides a great quantity of seedlings, my own raising, for several years; and not having seen any exhibited at the London shows so well grown as my own, I am induced to give you a few hints relative to cultivating them to satisfaction.

COMPOST.—Equal parts of good yellow loam, leaf-mould, and well-rotted manure, having a liberal drainage of broken pot, over which lay a few pieces of chopped turf.

SEEDLINGS.—Seed is generally to be had ripe *early* in the year, about May; *sow* a portion of it as soon as gathered, and the plants being potted off in large sixties, and then repotted, will bloom through winter. Sow another portion towards the end of July, pot the plants, too, into large sixties, and they will bloom from the beginning of April till midsummer. The best place to grow the stock in is a *dry* pit-frame. Though the Cineraria delights in warm *moist atmosphere* in its principal growing state, yet in winter, if *kept damp*, the leaves are very liable to rot at their stalks. If the pit has a fire-flue, or other means of warming, it is of advantage to dry up extra moisture, as well as protect in extreme frost from injury: the plants will not bear the least frost uninjured. Have the plants *near* to the glass, whether they be kept in a pit or greenhouse, and admit air when the weather is dry, in order to keep the plants robust and dwarf. They do not like a strong current of wind blowing against the leaves: they are easily broken by it. During spring cold easterly winds often prevail: do not allow them to blow *direct* against the plants; they suffer much when not so protected. A warm shower of rain is beneficial, and the lights may be taken off to admit it; or, whilst growing freely, syringe over head once a-day. Always repot when the one which the plant is in is full of roots. If allowed to be *pot-bound*, the plants soon become sickly and perish.

By having the stock in a pit-frame, a portion may be taken to bloom in a greenhouse, sitting-room, &c., successively. The early-raised plants may be brought into bloom by November, and the succession kept up till midsummer with perfect success.

To perpetuate fine varieties, they may readily be increased by suckers. As soon as the plants have done blooming, give them less water in proportion, or they will rot at the roots. Allow the main blooming stems to gradually die away; and as the leaves become withered, pinch them off. After blooming, take away a portion of the surface soil, two or more inches deep, and replace it with fresh compost, in order to encourage the growth of suckers. Plants that have done blooming, after the beginning of May, should be turned out of their pots entire into a prepared border, that is shaded from mid-day sun; here they soon begin to flourish, and produce suckers freely. By taking away the *strongest* suckers first to pot off, a succession will generally be produced, so that a prolonged season of having blooming plants from these may be obtained as easily as by seedlings.

The raising and proving of seedlings is a most interesting employment; they are easily raised, require but little attention, and *soon* display their flowers, not having to wait for a long period to ascertain the character of the plant. They bloom in profusion, are beautiful, and many of them diffuse a delightful perfume, most amply repaying for any attention, and are ornamental through the entire gloomy months of winter, either in the greenhouse or sitting-room; and having once obtained a few varieties of fine form and rich colours, a stock for a generation can be perpetuated by seed or suckers.

BRIEF REMARKS.

Autumnal Scenes, by Charlotte.—Those who have looked upon the shadows of the trees as they are reflected upon the ground at this season of the year cannot fail at being struck by the beautiful forms which they present. Every twig and branch is as clearly made out as if drawn with a dark pencil upon white paper; there you see endless patterns for embroidery and netting, open work, square or diamond-shaped threads, that seem to run into squares and ovals, crossing and turning in every imaginable direction. In frosty weather, almost every object we look upon is beautifully marked; from the ragged flakes that hang upon the moss-covered boughs; the crimson berries, that seem encrusted with the whitest silver; the dark leaves of the evergreens, along which run pearly lines of frost-work; the bladed grass, spangled all over with minute pearls, down to the starry and diverging rays, which every little hollow that contained water has assumed—all are beautiful.

But pick up the skeleton of a leaf when only the minute fibres are left, hold it between your eye and the light, and you will confess that never did lady wear a lace collar, woven in the finest frame, of so fine and delicate a texture as the net-work of the fallen leaf; and the graceful Cup-moss, when closely examined, is shaped in the forms of the most delicate cups, and urns, and vases, pale and dark green, and chased with silver, and all as neatly wrought as if they had come from the hand of the most skilful artist.

Whilst there is much for the naturalist to admire in the beautiful appearance of the crystallization of hoar frost on the trees and shrubs, and if examined the crystal will be found different in form on every different tree or shrub, there are in our own " fair land " now-a-days more cheering scenes in " Nature's open vegetable field," to me far more pleasing than crystal frost and snow in all their forms of beauty.

At this gloomy season of the year all flowers are valuable and cheering, especially those growing in the open air. Last December the 10th the day was so beautiful that I could not resist the temptation of a ramble in a neighbouring wood, for there was a dryness about the fallen leaves such as I had but rarely seen in winter. Wandering onward I arrived at a little dell. One side was in shade; on the other the golden sunshine slept. Strange, there was also a rich yellow light on the shady side of the dell. On a nearer approach I saw hundreds of Primroses in full flower; pale and beautiful, there they stood, throwing a sweet fragrance all around. Such a discovery, a few days before Christmas, would have been a fortune to a London flower-seller; and had they been dug up by the roots, and offered for sale, a whole dell full might have been disposed of in one day. Here and there, on sunny banks, I saw a profusion of the lovely pale blue Violets; and in beauteous contrast a neighbouring hedge-bottom was adorned with the bright yellow Buttercup. A pretty grassy glade, too, was bespangled with the ever-admired Day's-eye, or Daisy, especially attracting my attention to infantile hours, when beads of such I had formed. On either hand the Holly was displaying its rich green hue, and profusely adorned with their splendid scarlet and red berries, forming some of the brightest ornaments of the season. The Ivy, too, hung aloft in the richest green, bearing its thousand corymbous heads of flowers; while the Wild Rose-hips and haws, glittering like beads in thousands, highly gladdened the scene. The wood being part of a rich nobleman's domain, where pheasants in multitudes were preserved, and as these beautiful birds are fond of the fruit of the Snowberry, a vast number of clumps had been planted. Now, the bushes being five feet high, and in full bearing condition, the innumerable white berries, hanging like so many pearls, added beauty to the scene; and the rich colours of other adorned plants appeared more brilliant by closer contrast. By the sides of some walks which had been formed, and leading from the mansion, evergreen and other shrubs had here and there been planted for ornament. The surface soil being formed (I examined it) of loam, peat, and the decayed leaf-mould, it proved admirably adapted to the growth of those plants. Rhododendrons abounded in the hollows, and in summer must be gay indeed. Large plots, too, of the charming Berberis aquifolia, with its leaves of varied hues of colour, from the brightest shining green to the richest crimson, produced a striking effect; and whilst in spring the vast profusion of rich yellow blossoms must be gay beyond imagination, now the bushes are laden with its clusters of fine blue berries. As if to give in every movement a more enchanting view, a number of the very ornamental Spindle trees or bushes had been interspersed. There were three species now bowing their heads beneath the vast numbers of their pendulous fruit. The rich red exterior, in contrast with the fine orange-coloured berries, rendered them most charming objects. To change the scene, some *new species* of Thorns had been planted, and some were most admirably decorated with fine fruit. Those having yellow berries were situated to give greater contrast to the black and scarlet of others. Some had fruit as large as cherries, inviting both to sight and taste.*

In appropriate banks I observed the Mountain-ash branches bending with their large terminal heads of brilliant scarlet fruit. The Arbutuses were in bloom, and at the same time had a profusion of large fine fruit to additionally adorn them. The dry subsoil seemed to promote their fruit-bearing properties. The Lauristinus stood in the foremost rank, and its waxy-white heads of blossoms were in vast profusion. To afford a refuge for the game, large plots of the fruit-bearing Privet, clothed with panicled heads of its black berries, were not the least interesting objects; and a second source of shelter was supplied in the appropriate tracts of the pretty yellow-blossomed Furze, or Whin, a quantity of which was in bloom.

The nearer the mansion, the greater the variety of tree, shrub, and flower. My notes of all I admired are too lengthy for the present, and will be sent for another Number. I must, however, add, I was privileged to view the well-kept flower-gardens; and the grandest sight of my day's ramble was to behold a border, sixty odd yards long and two broad, filled with apparently every variety of beautiful Chrysanthemums. This finishing sight was a treat so unexpected and rich, that on reaching home and describing my treat, a friend, a celebrated florist, sat down and penned the following particulars on this tribe of flowers:—

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* The two best are Cratægus aronia, yellow-fruited, and C. orientalis, scarlet-fruited, very large and abundant.—CONDUCTOR.

China having poured her autumnal gifts so abundantly into our gardens, parterres, &c., the winter of *those places* is considerably shortened; and of all the floral beauties which that fertile country has afforded us, none has so much contributed towards enlivening the autumn season as the favourite flower of the Chinese Mandarins, the Chrysanthemum. The name is derived from the Greek *chrysos*, GOLD, and *anthos*, A FLOWER. This was given because the kind most familiar to the Greeks produced flowers of a golden colour.

The Chinese Chrysanthemum was first introduced into England in 1764, Miller having received it from Nimpu, and cultivated it in the Botanic Garden at Chelsea; but it was lost, and introduced again by Monsieur Blanchard, a merchant of Marseilles, who brought the well-remembered *purple* variety from China to France in 1789, from whence it was sent to England in 1795, and was then sold at a very high price by the London nurserymen, and introduced into the conservatories and greenhouses of the wealthy. It soon escaped, however, from such confinement; and long ago it had spread to every part of the island, ornamenting the casement of the cottager, as well as the establishments of the opulent, with its beauties.

The attention of nurserymen and florists on the continent has lately been particularly directed to raising new and improved varieties. Very great success has resulted, both in the large-flowered section and that of the Minima, or Pompones. Some of the latter section are very beautiful: fine plants, properly bloomed, have a most charming appearance, being like so many neat small Ranunculus blooms, or in other cases like the neatest double Daisies.—(*To be continued.*)

NEW DAHLIAS OF 1851, BY MR. GLENNY.—*Scarlet King.*—A full-sized bold symmetrical flower, well cupped. The centre tolerably well up, face good, and outline unexceptionable. As times go, decidedly an acquisition to the bright scarlet class.

Dr. Frampton.—A beautiful model of a flower, white ground, but edged deeply with rosy purple; one of the very best forms we possess, as good as the Dahlia King, and without its fault of reflexing. Under medium size as grown near London.

Sir F. Thesiger.—A lovely rose, of fine form, beautiful outline, and good face; shown variously, and sometimes indifferent, but on some occasions unexceptionable: it is not the colour of our other roses, but richer, and a medium size.

Bob.—A scarlet of abundant stuff, good outline, and symmetrical; centre very solid, but a little sunk. A flower to all appearance desirable among the dense red.

Sir Richard Whittington.—A remarkable colour, clarety purple; a fine model, but rather coarse in the petals; centre better than the average, and outline good. For a new colour, as well as a better than average shape, desirable.

Ariel.—White, as shown; general average of qualities respectable, but nothing extraordinary. If constant, it will be very useful, as we last year said of the Queen of the West, which, however, has so far proved quite the reverse, though we shall not give it up.

Una.—Also a white; but will, as generally grown, be, we think, loose, though it is scarcely fair to speak of a thing seen only once.

Laura Lavington.—A new coloured fancy, dull bronzy salmon or fawn colour, tipped with white. Perfectly new, and better than average form among the fancies.

Triumphant.—The only fancy we have seen that will do to show as a self. It is a bold crimson scarlet, showing the backs of the petals a good deal, but comes up tolerably well; as a tipped flower it tops all the fancies, and it has been shown three tipped. and three self in the seedling stand.

Annie Salter.—A perfectly novel fancy variety, white in the centre, pinky lilac towards the side, and tipped rose.

Kossuth.—Fancy red and white, fuller than the average, and likely to be useful as an improvement.

Miss Ward.—Not a beat on Mrs. Hansard, but of a similar colour, and occasionally quite equal.

Miss Wentworth.—A light flower, with a tip that shades off inwards to a white. The only time we saw it the specimens were quite up to any of the cupped light flowers, the outline good, and the face bold; eye better than average.

Morning Star.—Brilliant orange-scarlet; is an acquisition for its colour, though no advance in form.

Louisa Glenny, yellow; *Robert Montgomery*, dark crimson; *Rose of England*, very bright pink; we have only seen the single blooms of: so far as these went they are very promising.

These are all we can say anything about, out of very nearly six hundred varieties we saw during the season.

CANDLE TREE OF PANAMA.—A production, less beautiful but equally singular, is the Palo de Velas, or Candle Tree (Parmentiera cereifera, Seem.) This tree is confined to the valley of the Chagres, where it forms entire forests. In entering them, a person might almost fancy himself transported into a chandler's shop. From all the stems and lower branches hang long cylindrical fruits, of a yellow wax colour, so much resembling a candle as to have given rise to the popular appellation. The fruit is generally from two to three, but not unfrequently four, feet long, and an inch in diameter. The tree itself is about twenty-four feet high, with opposite trifoliated leaves, and large white blossoms, which appear throughout the year, but are in greatest abundance during the rainy season. The Palo de Velas belongs to the natural order Crescentiaceæ, and is a Parmentiera, of which genus, hitherto, only one species, the P. edulis, De Cand., was known to exist. The fruit of the latter, called Quauhxilote, is eaten by the Mexicans; while that of the former serves for food to numerous herds of cattle. Bullocks especially, if fed with the fruit of this tree, Guinea Grass, and Batatilla (Ipomœa brachypoda, Bent.) soon get fat. It is generally admitted, however, that the meat partakes in some degree of the peculiar apple-like smell of the fruit; but this is by no means disagreeable, and easily prevented, if, for a few days previous to the killing of the animal, the food is changed. The tree produces its principal harvest during the dry season, when all the herbaceous vegetation is burned up; and on that account its cultivation in tropical countries is especially to be recommended: a few acres of it would effectually prevent that want of fodder which is always most severely felt after the periodical rains have ceased.—*Hooker's Journal of Botany.*

HOLLYHOCKS.—Now is the best time to plant these noble flowering ornaments, in order to bloom satisfactory the next season. A selection ought to be grown in every garden. The improvement in form and size within the last few years has been great. The properties of thick petals, with even (not notched) edges is now considered essential to a good flower. The centre florets should be compact, rise and extend so as to form half a globe, and the outer petals to form a complete circle, and not to extend more than half an inch beyond the rising centre. The following varieties are considered the best:—Model of Perfection, chocolate and white; Queen, blush; Coccinea, rich red; Enchantress, deep pink; Pulchella, light rose; Rosea grandiflora, rosy-pink; Mr. Charles Baron, pink and salmon; Obscura, mottled grey and purple; Fireball, light red; Magnum Bonum, dark maroon; Aurantia, orange and red; Bicolor, purple and white; Purpurea Elegans, rich purple; Sulphurea Perfecta, pure; Comet, ruby red; Attraction, veined chocolate and white; Delicata, French white; and Walden Gem, a rosy ruby-red.

MISCELLANEOUS SECTION.

REVIEW.—*A Treatise on the Cultivation of the Chrysanthemum.* By William Ivory, Gardener to the Rev. George Chetwode, Chilton House, Thame, Oxon.

WITHIN the last four years there has been a surprising improvement in the culture of this charming tribe of flowers. The blossoms are produced now nearly double the size of what we had previously seen. In confirmation of the vast improvement, those of our readers who have attended the exhibitions at Stoke Newington and Highgate, near London, have had ample evidence in the splendid specimens shown. The author of the treatise we now notice is an equally successful cultivator: on plants about two feet high he has as many as a dozen flowers; and of the larger-growing class some of the blossoms are nearly a span across. And of the compact growing varieties they are like the best double Dahlia blossoms, both for size and perfection. Mr. Ivory's success has been so remarkable, that he has been induced to publish his mode of treatment in a neat pamphlet. The following extracts will give our readers some idea of its excellence; and we beg to assure them that every lover of this tribe of flowers will be amply recompensed by a perusal of the work. Mr. Ivory merits that encouragement, and we trust he will receive it. Speaking of "blindness," he says:—

"It is of the utmost importance to have the cuttings of a moderate growth and size, not the coarse flabby-leaved ones, similar to those produced from deep suckers; but such as are produced from the old stems just beneath the surface, which are firmer in their texture, and strike more freely. Indeed it is of the greatest moment to secure this condition, for success depends more upon securing plants of uniform growth, and so preventing their going what is called 'blind,' than upon anything else, as I have many times proved. Last season was a noted one with growers, inasmuch as great numbers of plants went blind. Some attributed the defect to one cause, and some to another; but I am satisfied that selecting improper cuttings has more to do with it than any other."

The soil he uses for the first potting is equal parts of loam and leaf-mould, with a little sand. In potting for the last time in the middle of July he uses eight-inch pots for blooming them in, with soil of three parts loam and one part rotten dung, placing only one piece of crock at the bottom of the pot for drainage. After the plants are stopped and the pots filled with roots, so soon as the side shoots are two or three joints in length, he gives them, for the first time, some weak liquid manure, prepared by mixing either a bushel of sheep droppings or soot in a large tub of water, which must be well stirred up, and then allowed to settle; he then well dilutes it again with soft water before using it, which is two or three times a-week, but not oftener. In thinning the plants he says:—

"So soon as the side shoots are three or four joints long, look them over and reduce them to the number required. Such kinds as Annie Salter, Queen of Yellows, Defiance, L'Ange Gardien, and all with similar free habits, I allow from twelve to eighteen shoots; if very fine blooms are required, thin them out to twelve; if a larger number are desirable, they will carry eighteen, but which, of course, will be smaller. These plants look very beautiful when properly sticked out; such kinds as the Duke, Clustered Yellow, Queen of the Gipsies, Formosum, and Nonpareil, from ten to twelve blooms.

"It should here be observed, with regard to those late kinds, the cuttings of which were directed to be put in by the third week in May, are also to be potted and stopped each time in advance of the early sorts, as the shoots require longer to mature themselves. In thinning out the shoots, leave them equally distributed, so as to form a handsome uniform plant; if succours appear from the bottom, stop them just above the soil, as they may be useful after a time, in case a few of the bottom leaves go off. The Queen of Yellows is liable, after stopping, to produce two or three very strong shoots from the top, and grow quite away from the lower ones: these strong shoots must be removed as soon as they appear; if not, they will spoil the plants quite. I recommend to grow several plants of Vesta, Pilot, Nonpareil, and the Bride, where convenient, they being four of the finest ever raised, are distinct colours, and of good habit."

Treatment of the Plants after Housed.—"At this time, in most gardens there are empty cucumber and melon pits, or vineries; now in those pits where a moderate bottom-heat (from 65° to 70°) can be secured, is just the place for them, to be plunged to half the depth of the pots, which heat is to be maintained until the buds begin to expand, or until the first week in November. The effects of the pots being full of firm sound roots, the bottom-heat and dry air will soon be perceptible. Before plunging the plants, let the surface of the soil become quite dry, so that if bad weather sets in, the foliage will not be choked with damp, nor will mildew attack them, which is sure to be the case when surrounded by stagnant moist air. In watering the plants after plunging, be careful not to wet the surface of the soil in which they are plunged: I have proved the importance of attending to this. Give plenty of air day and night, only exclude from frost and rain both the foliage and buds, the last named in particular, for if wetted now they are apt to be one-sided. In plunging, give plenty of room; and if in pits, have the lights off as much as possible. At all times endeavour to secure a circulation of air; if this is not done, the foliage cannot prepare food for the bud, the footstalk becomes weak and lank, and the leaf turns yellow. Where bottom-heat cannot be secured, set the plants out thinly in houses, and by all means keep the air dry and moving, watering the roots at all times with water at from 65° to 70°, which will in some measure answer the purpose. Without bottom-heat I have never been able to produce blooms anything like in point of size and form as with it. Those kinds which come semi-double in a usual way, will come perfectly double under this treatment; indeed, in all kinds it forces the centre out, so as to form a perfect flower, approaching in size and form a first-rate Dahlia. When the plants are plunged, lift them up now and then, as, if they root through the bottom, those roots in the pots will become inactive and die. As the centre of the blooms begin to come up, withdraw them from the heat gradually, and stick them according to taste. Many kinds are better left as they grow, unless intended for exhibition, when they must be secured to prevent bruising; but plants grown in this way, in a few weeks (the shoots being of equal strength, able to support themselves, clothed with foliage to the bottom, and eighteen or twenty inches in height), are very different to manage, and move from place to place, to the naked lank things too often seen. If, in any stage of growth, mildew attack them, which is generally on the under side of the leaf, fill a common dredging-box with flower of sulphur, turn the plant upside down, then dredge it, and let it remain on; it will prove a safe and sure stop to its ravages, which, if neglected and allowed to spread, will certainly spoil the foliage. When the blooms are fully expanded (which they will be after the middle of November), keep the roots rather drier than usual, watering them in the morning; by this treatment the blooms will remain perfect for five or six weeks. I have had some kinds quite fresh up to the beginning of January."

Summary.—" Put in the cuttings from the middle of May to the middle of June, have all potted-off by the middle of July, have them all placed in the blooming pots by the first week in August, and all stopped within the first ten days of August; let all the plants be plunged into bottom-heat (where convenient), and protected from wet and cold, by the middle of October, and if all goes on well, they will be in bloom by the middle of November; so that the whole time occupied, from commencing with the cuttings to the time of their being in full bloom, is about twenty weeks."

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

THE Chrysanthemum is the most valuable plant we have for autumn decoration, either for the greenhouse or the flower-garden; it fills up a blank that no other plant we have could do. It supplies a profusion of beauty of almost every colour. It has become a desideratum in all well-managed flower-gardens, having the facility to plant a proper proportion of the most showy kinds, which ornament them, when the season keeps open, up to December. This autumn they are injured somewhat earlier than usual. In order to have the flower-garden lively as possible, the succession to Chrysanthemums must be made up with evergreen shrubs; it is readily done at a trifling cost by plunging in potted plants of Lauristinus, Aucuba, myrtle-leaved, broad-leaved, and variegated Box; gold and silver-striped, green-leaved, yellow and crimson-berried Hollies; Arbutus, Rhododendron, Mahonia aquifolia, Phillyrea, Arbor vitæ, Bay, Kalmia latifolia, dwarf Laurels, Daphne pontica, Cedars, &c. A garden thus furnished produces a very cheering appearance; and those who have not seen one so ornamented cannot adequately conceive of its beauty and finished neatness. This attention most amply repays for the small expense, producing a lively appearance, instead of having bare beds for several months. If any Tulip-bulbs be still out of ground, plant them as early as possible.

There are a number of very handsome single and double varieties of Anemones, which are highly ornamental to a flower-garden, whether in patches in the beds, or as an edging. To bloom well next season they must be planted immediately.

The Gentiana acaulis is a most charming spring flower, suited admirably for edging or patches. Its intense blue flowers, in contrast with Anemones, Hepaticas, and similar early-blooming plants, is very striking. Attention will be necessary to protect the tender kinds of herbaceous by a layer of dry leaves, pots, boughs or branches of evergreens, &c., also the stems of tender climbing and other Roses, by tying a covering of furze over them, that, whilst it fully protects, admits sufficiency of air for the well-being of the plant.

Auriculas and Polyanthuses will require plenty of air in fine weather, and but little water. The like attention will be required to Carnations, Pinks, &c., kept in Pots. Dahlia roots should be looked over, to see if any are moulding or likely to damage. Let the roots be dry before they are laid in heaps. Newly-planted shrubs should be secured to stakes, so that they are not loosened by the wind. Pots of Carnations and Picotees should be placed in a situation where they may have free air, and be raised above the ground. If they are under glass, it will be much better than when exposed to the wet and severity of the winter, or many will, in all probability, be destroyed. Where it is desirable to leave patches of border flowers undistributed, reduce them to a suitable size by cutting them round with a sharp spade. When it is wished to have a vigorous specimen, it is requisite to leave a portion thus undisturbed. Ten-weeks' Stocks and Mignonette, in pots for blooming early next spring, to adorn a room or greenhouse, must not be over-watered, and be kept from frost. A cool frame, well secured by soil or ashes at the sides, and plenty of mats or reeds to cover at night, will answer well. During hard frosts, if additional soil be required for flower-beds upon grass lawns, advantage should be taken to have it conveyed at the time, so that the turf may not be injured by wheeling. Pits or beds for forcing Roses, &c., should be prepared early in the month. Tan or leaves are most suitable, unless there be the advantage of hot water or steam. New-planted shrubs of the tender kinds should have their roots protected by laying some mulch. Suckers of Roses, &c., should now be taken off and re-planted for making bushes, or put in nursery rows. Soils for compost should now be obtained. Beds of Hyacinths, Tulips, &c., should have occasional protection. Any roots not planted may successfully be done, in dry mild weather, till February. Sweet Violets: plant these little gems as much as possible along the sides of walks, near seats, rooms, banks, under trees, &c.; they are so highly fragrant as always to be acceptable, and more especially being early spring flowers. Encourage all the spring ornaments as much as possible: Crocusses are pretty flowers, always gay in sunshine, and give a peculiar cheerfulness to every place they occupy; never be sparing in quantity of them near a dwelling-house. Do not omit the first flower that awakes thee from the repose of winter,

> "A flower that first in this sweet garden smil'd,
> To virgins sacred, and the SNOWDROP styl'd."

IN THE STOVE.

Aconites, Crocuses, Violets, Mignonette, Stocks, Tulips, Cyclamens, Narcissus, Lilies of the Valley, Hepaticas, Primroses, China Primroses, Persian Irises, Cupheas, Hyacinths, Pinks, Carnations, Tree Carnations, Heliotropes, Scarlet Geraniums, Salvias, Gardenias, Roses, Azaleas, Cinerarias, Jasmines, Honeysuckles, Deutzias, Rhododendrons, Persian Lilacs, Rhodoras, Ribes, Mezereums, Correas, &c., required to bloom from January, should be brought in early in the present month. The plants should be placed at first in the coolest part of the house; never allow them to want water. Pots or boxes containing bulbous-rooted flowering plants, as Hyacinths, Narcissus, Persian Irises, Crocuses, &c., should occasionally be introduced, so as to have a succession of bloom. Many persons who take a delight in growing Hyacinths or other bulbous plants, for adorning a room or window, in winter or early in spring, have been frequently disappointed by the abortiveness of some and weakness of others. This principally arises from the inability of the plant to develop itself with a rapidity equal to the quantity of moisture it imbibes, on account of its upper surface being acted upon too immediately by the atmosphere; hence arises the necessity of covering the bulb. That such is a fact is evidenced by the admirable and certain success of nearly every bulb, especially Hyacinths, that is covered with about six inches of old spent bark or ashes. This or some similar light material should always be used. Even bulbs intended to bloom in glasses 'we prefer starting in the cold bark, and then transferring them to the glasses when the roots are about two inches long. Where such covering is not adopted, the pots or glasses should be kept in a dark place till the roots are two or three inches long, and then bring them to the light. Always use water for the glasses that is just aired ; cold water gives a check which greatly injures the roots, and consequently the bloom. Cactus plants that have been kept out of doors, or in the greenhouse, should occasionally be brought into the stove for flowering, which gives a succession. If any of the forced plants be attacked with the green fly, a syringe with diluted tobacco-water will destroy them. If the leaves appear bit, and turn brown (the effect of damage by red spider), a syringe of soap-suds at the under side of the leaves is effectual to destroy them. The glutinous substance remaining, not only kills those it is applied to, but prevents others returning there. The old Eranthemum pulchellum, with its fine blue flowers, Justicia speciosa, Gesneriæ zebrina, Justicia pulcherrima, Aphellandria cristata, Poinsettia pulcherima, Cestrum aurantiacum, and Begonia fuchsioides, are fine winter ornamental blooming plants.

IN THE GREENHOUSE.

As much fire as will barely keep out frost will only be necessary, and for the purpose of drying up damp arising from foggy nights, or from watering. All possible air should be admitted in the day-time; but mind to keep the plants from damage by frost. The plants must not be watered overhead. Some of the Chrysanthemums that are grown in pots and taken into the greenhouse will be found to have pushed a number of suckers. If the offsets are wanted for the increase of the kind, it is advisable to pinch off the tops, so as to prevent their exhausting the plant and weakening the flower. If the flower-buds are thinned out freely, it conduces to the increased size of those left. If the offsets are not wanted, it is best to pull up the suckers entire. Attention will be required to watering, as the roots absorb much if given: give manure-water occasionally. If the plant is allowed to wither, it checks the flower, whether in bud or expanded. So much do we admire this handsome genus of flowers, that we are fully persuaded their beautiful blossoms, exhibited in form and colour, will most amply repay for any labour that may be bestowed on the plants. If seed be desired, retain the blooming stems on the plants, and keep them for some time in an airy warm situation to perfect.

Dahlia seed is best retained in the heads as grown, spread singly where they will not be liable to mould, and kept in a dry but not too hot a situation; being thus kept in the chaff, the small seed will not shrivel, but be kept plump. The roots must be dried well before being put away, or will be liable to rot. Fuchsias and greenhouse plants, intended to be inured to the open air, will require to have protection at the roots, and probably, for the first winter, over the tops too, by furze branches, canvas, wicker baskets, mats, &c. If greenhouse plants require watering or syringing over the tops, let it be done on the morning of a clear day, when air can be admitted; and towards evening a gentle fire-heat should be given. Be careful to protect beds of what are technically called "florists' flowers," should severe weather occur. Calceolarias that were cut down and re-potted last month will require attention, not to water too much, or they will damp off. Keep them in a cool situation. Whilst in a cool and moist atmosphere, the shoots will often push at the underside numerous rootlets. Where such are produced, the roots should be taken off and potted; they make fine plants for next season, and are more easily propagated now than at any other season. Pelargonium plants for exhibition should be re-potted by the middle of this month; according to the size of the plants must be the pots. The smallest-sized pots in which plants are to be when shown are the 24's, eight inches in diameter, and the largest-sized are eleven inches in diameter. The plants need not be potted into these sizes now, but a size less, and in February be re-potted into their final pots. The plants must not be crowded together, but be kept apart. Cinerarias are often attacked at this season by the green fly; let the plants be placed in a hot-bed frame, and be fumigated with tobacco-smoke at the first appearance of the insects.

TRAINING PELARGONIUMS TO FORM DWARF BUSHY PLANTS.

Many readers of this Magazine have, doubtless, been struck with the *dwarf bushy* character of the Pelargoniums that have been exhibited at the London shows for the last three seasons, for previously, even at these shows, the plants were grown lanky and too tall; but recently there has been a most marked improvement, both in the general class, as well as the fancy one. Of course to bring the plants into the shape they have, the cultivator has to pay some regular attention, so that each shoot may occupy the best position, and *every* shoot to have its truss of flowers. The plants may be brought into the desired form by pursuing the following method of treatment:—

Commencing at an early stage of their growth, the young shoots are carefully bent down, at proper distances from each other, and secured at their desired position by hooked pegs, from the hedges, &c., or formed of copper wire. If there is danger of breaking the shoots, by bringing them at once as low as may be requisite, viz., the bottom tier nearly to the rim of the pot, &c., lower the pegs at two or three times, till the proper shape is obtained. When the shoots extend beyond the sides of the pot, then a rim of wire being secured close under the edge of the pot, the shoots can be secured to it, be properly arranged, and they will soon assume a permanent position and form. When the plants are to be taken to the show, the scaffolding must be taken away, and they must appear *without artificial* assistance.

This mode of management should commence in spring, with the plants which were struck the previous summer: and when such have bloomed one season, being pruned in, and push for a second year's bloom, they will then form the larger blooming specimens for showing. It is not usual to keep three years' old plants of the general class of Pelargoniums, but after blooming a second season they are thrown away. The fancy class do not grow so vigorous, and the plants can be bloomed satisfactory for showing for four or more successive seasons. Sometimes branches are liable to split at *the fork*, therefore before attempting to depress them, secure the two together just above their junction.

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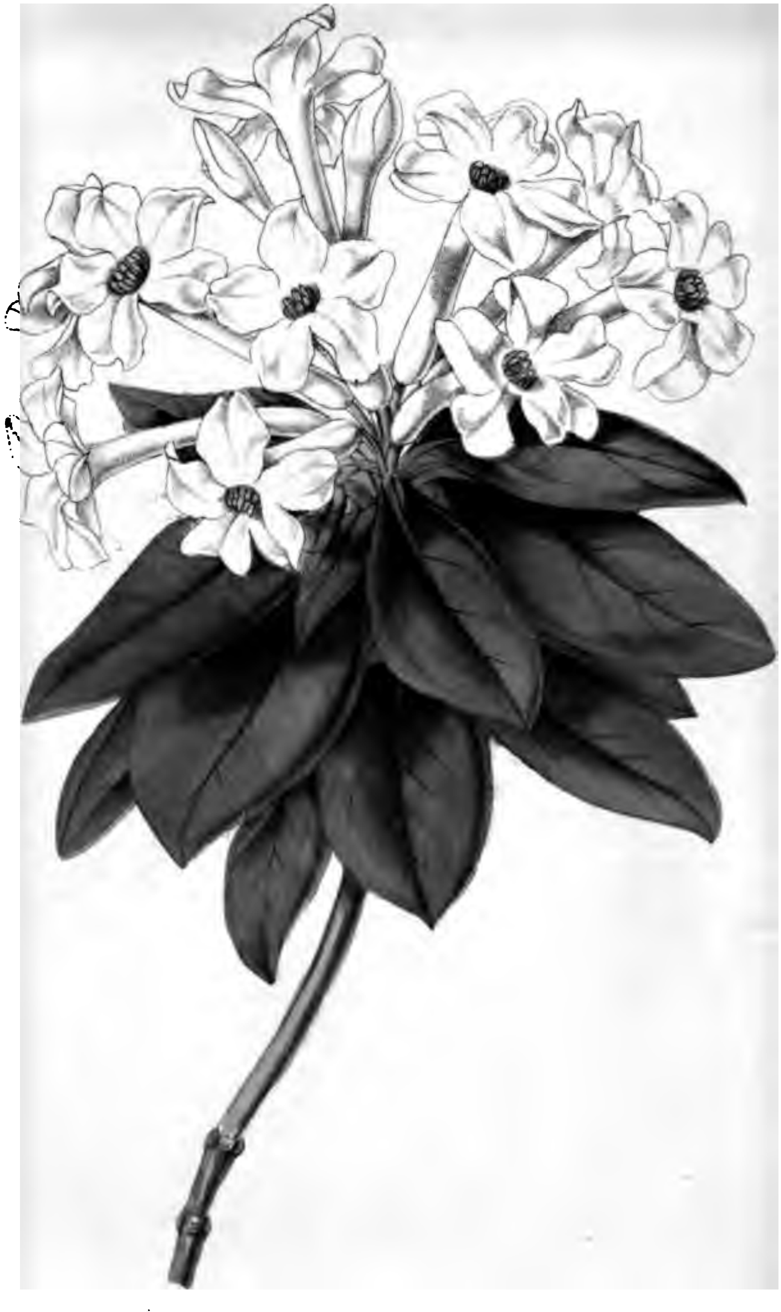

Rhododendron Jasminiflorum.

THE

FLORICULTURAL CABINET,

AND

Florists' Magazine.

JANUARY TO DECEMBER, 1852.

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PREFACE.

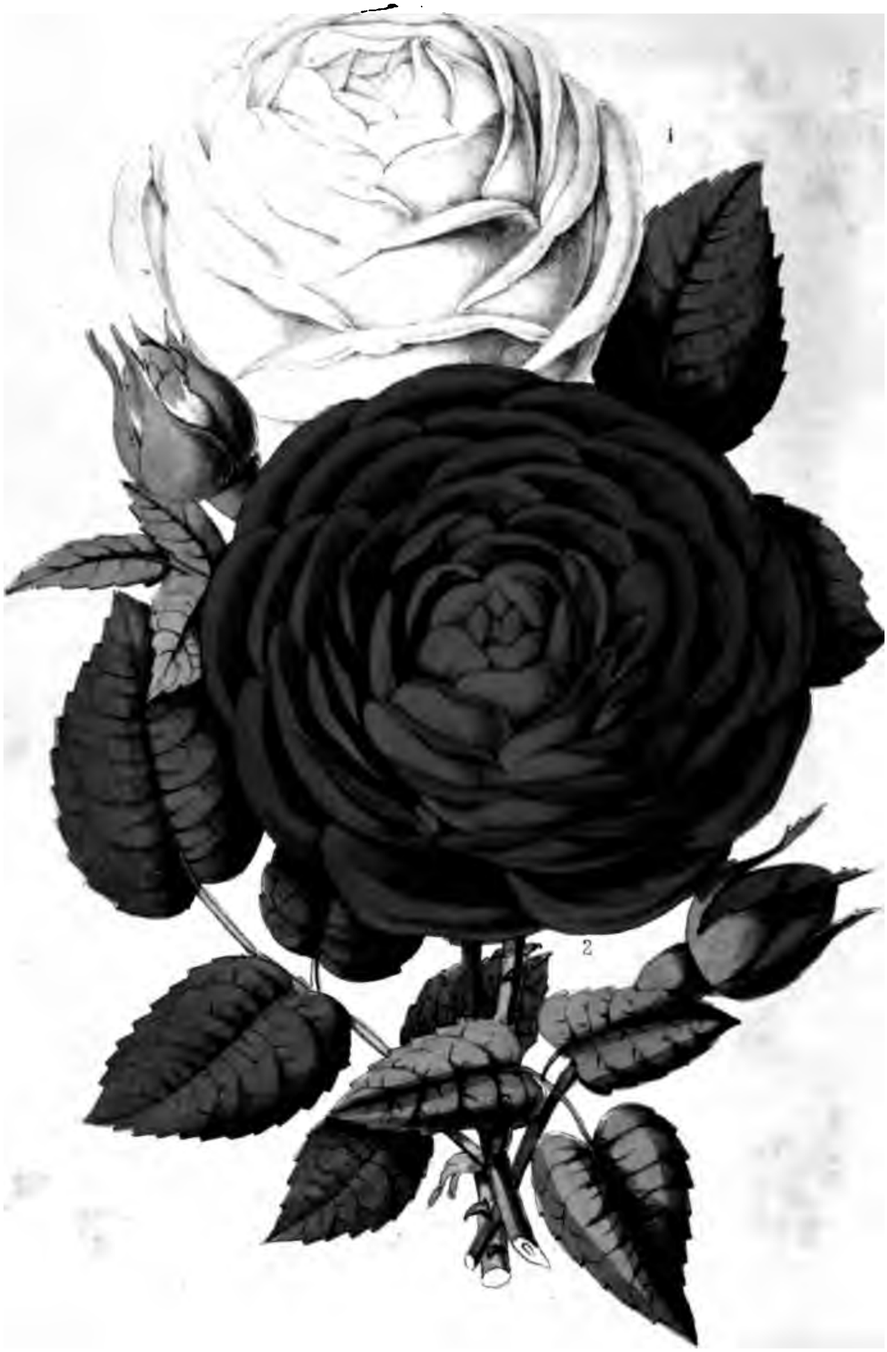
THE close of each successive year, and with that the completion of another Volume of our Magazine, has been, and still is to ourselves a matter which produces serious reflection, and we assure our readers that on the present occasion it is with far more than ordinary feelings of gratitude that we enter upon our closing remarks in the present PREFACE — recollecting that it is the finish of the TWENTIETH VOLUME OF THE FLORICULTURAL CABINET, AND FLORISTS' MAGAZINE.

To have the honour of recording this fact, is in consequence of the great and continued kindness which we have been favoured with by our Correspondents, Subscribers, and Readers; and we most respectfully solicit their acceptance of our very sincere thanks, for that generous and liberal support which has been afforded us.

During the present year we have pursued with our Magazine the same course we had previously done, viz., to render it a source of floral pleasure and of useful information on everything connected with floriculture, avoiding anything distasteful or unedifying, and uniformly aiming to meet the requirements of all our readers. It is gratifying to us to state, that during the past year we have received many flattering testimonials of approval.

Our future exertions will be directed with every endeavour to improve upon the past; and we again respectfully beg the assistance of our readers, and with it we shall be enabled to realize more than our professions. We intend to insert a number of Designs of Flower-gardens, Grounds, etc. We do this in consequence of having recently received many private applications for such assistance. At all times we shall be highly gratified to meet the wishes of our readers; and having ascertained these, we reiterate the assurance that no practicable means of rendering our Magazine additionally and enduringly useful shall remain untried.

> "Happy who walks with Him! whom what he finds
> Of flavour or of scent in fruit or flower,
> Or what he views of beautiful or grand
> In Nature, from the broad majestic oak
> To the green blade that twinkles in the sun,
> Prompts with remembrance of the present God!
> His presence, who made all so fair, perceived,
> Makes all still fairer. As with Him no scene
> Is dreary, so with Him all seasons please."—*The Task.*



1. Queen Victoria. 2. Standard of Marengo.

FLORICULTURAL CABINET

JANUARY, 1852.

ILLUSTRATIONS.

ROSES.

1. QUEEN VICTORIA.
2. STANDARD OF MARENGO.

IT is an honour to have our first Number for the present year ornamented with portraits of "The Queen of Flowers," and more especially so, by one bearing the name of OUR BELOVED QUEEN VICTORIA, accompanied by that universally admitted "model form for all cupped Roses," THE STANDARD OF MARENGO.

> "Allied by nature in your kind,
> And differing but in hue,
> You both possess intrinsic worth,
> And outward beauty too."

It is related in *Fable* of the birth of the ROSE that Flora having found the corpse of a favourite nymph, whose beauty of person was only surpassed by the purity of her heart and chastity of mind, resolved to raise a plant from the precious remains of this daughter of the Dryads, for which purpose she begged the assistance of VENUS and the Graces, as well as all the deities that preside over gardens, to assist in the transformation of the nymph into a flower, that was to be by them proclaimed Queen of all the vegetable beauties. The ceremony was attended by the Zephyrs, who cleared the atmosphere, in order that Apollo might bless the new created progeny with his beams. Bacchus supplied rivers of "Nectar" to nourish it, and Vertumnus poured his choicest perfumes over the plant. When the change was complete, Pomona strewed her fruit over the young branches, which were then crowned by Flora with a diadem that had been purposely prepared by the celestials to distinguish the QUEEN OF FLOWERS.

Another mythological writer relates, that Rhodanthe, Queen of Corinth, to avoid the pursuit of her lovers, fled to the temple of Diana to conceal herself; but being besieged by lovers, and obliged to appear, she called on the people for help, who, on beholding her beauty, threw down the statue of Diana, and declared her to be the goddess of the temple; upon which Apollo changed her into a Rose.

The Turks are great admirers of the Rose, and Musselmans, in general, believe that it first sprang from the perspiration of Mahomet, on which account they will not suffer a rose-leaf to lie on the ground, or permit any one to tread upon this sacred flower. Warriors crown themselves with garlands of Roses during their principal repast. Pliny tells us, that the delicate meats of the ancients were either covered with rose leaves, or their fragrant oil was sprinkled over. At a feast which Cleopatra gave to Antony, the royal apartments were covered with rose leaves to some depth. In Turkey a Rose is sculptured on the tomb of all ladies who die unmarried. Pope Julius the Second sent a consecrated Rose of Gold dipped in chrism, and perfumed with musk, to be presented by Archbishop Warham to King Henry the Eighth, at high mass, with the apostolical benediction. The king received the precious Rose, and still more precious benediction, with profound reverence and excessive joy. Mary, Queen of Scots, sent a magnificent rose-tree to Rosnard, the French poet of the sixteenth century, which was valued at two thousand crowns. Boyle relates, that at the baptism of Rosnard the following accident occurred:—

It was customary to bring large vases full of rose-water, and baskets of flowers to christenings; and as the nurse was going to the church with the infant poet she let her flowers fall, and in turning to recover them she touched the attendant who carried the vase of rose-water, and spilt it on the child; this was regarded as a happy presage of the *good odour* that would some day attend his poetry. Eastern poetry abounds in flowery allusions to the Rose. "You may place a hundred handfuls of fragrant herbs and flowers before the nightingale, yet he wishes not for more than the sweet breath of his beloved Rose."

"Oh! sooner shall the rose of May
Mistake her own sweet nightingale,
And to some meaner minstrel's lay
Open her bosom's glowing veil."—Moore.

The island of Rhodes (Greek, *Rhodon*, a Rose) took its name from the prodigious quantity of Roses with which it abounds.

Ludovica Verthema, who travelled in the east in the year 1503, observes, that he saw a great quantity of these flowers at Calicut, both red, white, and yellow; and Sir William Ouseley tells us, in his work on Persia, that when he entered the flower garden belonging to the governor of a castle near Fassa, he was overwhelmed with Roses. In Persia, wine and other liquors are brought to table with a Rose in the bottle, instead of a stopple or cork. Jackson says, that the Roses in the garden attached to the Emperor of Morocco's Palace are unequalled for quantity, and that mattrasses are made of their petals for persons of rank to recline upon. We read in Father Catron's "Historie of Mogul," "that the celebrated Princess Nourmahal caused an entire canal to be filled with rose-water, alongside of which she and the Great Mogul might walk, and the heat of the sun disengaging the water from the essential oil of the Rose, this substance was remarked floating on the surface of the canal, and diffused a delightful perfume; and it was thus that the 'Otto of Roses' was first discovered."

In our own, as well as neighbouring nations, the Rose is held in high and yearly increasing estimation. It is deemed the "Emblem of Beauty;" "The Pride of Flora;" and to reign "Queen of the Flowers." It is also ENGLAND'S NATIONAL EMBLEM.

Poets of all nations have sung its praises, yet what poet has been able to do justice to a flower that is considered to be "the glory of the spring and summer," as well as "the ornament of the earth." They have celebrated its charms without exhausting its eulogiums, for its allurements increase upon a familiarity, and every fresh view presents new beauties, and gives additional delight. Hence it is said to renovate the imagination of the poet, and the very name of the flower gives harmony to his numbers, as its odours give sweetness to the air. As the Rose is the most common of all that compose the "Garland of Flora," so it is deemed the most delightful. And to paint this universal emblem of delicate splendour in its own hues, the pencil should be dipped in the "tints of Aurora" when arising amidst her aerial glory. Venus herself finds a rival in the Rose, whose beauty is composed of all which is exquisite and graceful.

It has been made the symbol of sentiments as opposite as various. PIETY has seized it to decorate her temples, whilst LOVE expressed its tenderness by wreaths, and JOLLITY revelled adorned with crowns of Roses. GRIEF strews it on the tomb, and LUXURY spreads it on the couch. It is mingled with our tears, and spread in our gayest walks. In EPITAPH it expresses youthful modesty and charity. The beauty of the MORNING is allegorically represented by it, and AURORA is depictured strewing Roses before the chariot of Phœbus.

"When morning paints the eastern skies,
Her fingers burn with roseate dyes."

It is supposed to have given name to the HOLY LAND, where SOLOMON sung its praise, as SYRIA appears to be derived from *Suri*, a delicate species of Rose, for which that beautiful country has always been famous, and hence called SURISTAN, THE LAND OF ROSES.

At what time the Rose was introduced into the gardens of our own country is uncertain. Chaucer wrote upon it being there five hundred years ago. It is evident, too, that the principal gardens of the kingdom, "in the early days," were attached to PRIORIES and other religious edifices, and from the luxurious manner in which the ROMANS lived in this country for many ages previous to the "year 400," and from their habit of wearing wreaths of Roses at their banquets, it is more than probable that their gardens contained collections of these beautiful flowers.

During the last twenty-five years there has been much attention paid to raising Seedling Roses, particularly in France, where the climate is very suitable for the process. Great indeed has been the success. Flowers of much more *decided colours* have been raised, some of which are intensely brilliant and showy. In size, too, much has been achieved.

And by the process of impregnating the flowers of various classes new sections have been formed of the productions, and now we can have, in the open air of our own country, Roses in bloom nearly all the year. The classes which bloom so freely during the latter part of summer and autumn are a most valuable acquisition. Another essential to be realized has been to obtain a *perfect standard* of form, one in *each section* of Roses, suited to its blossoms, and in this particular much has been effected.

The two new varieties we now figure are of the PERPETUAL CLASS, but apparently they are hybrids of *distinct sections*. They are of first-rate excellence, and ought to have a place in every collection, even in every garden.

1. PAUL'S QUEEN VICTORIA ROSE is a Seedling from the much admired "LA REINE," of which it is so exact a copy in every respect, save colour, that it has been designated by some the "WHITE LA REINE." The ground colour is white, overlaid with the most delicate hue of pink, and of a wax-like appearance. It is very distinct from any other Rose. Specimens of its flowers have been shown at the Floral Society's meetings in London during the past season, and from an half blown flower our artist has drawn the one we figure. The full blown flower is of good size, and will prove a charming companion to the higher coloured ones.

Mr. William Paul, Nurseryman, of Cheshunt, Herts, obtained this beautiful variety in the neighbourhood of Paris, and is now, for the first time, offering plants for sale.

2. STANDARD OF MARENGO ROSE is also an Hybrid Perpetual. It has been generally understood to have been a seedling from the splendid "Geant des Batailles." Some persons, however, suppose it to be raised from "Duc d'Aumale Rose." It was first sent out by Messrs. Guillot, of Lyons, in France, who also sent out the Geant des Batailles, but the present one much surpasses even that fine variety. It is superbly brilliant, fine form, petals stiff, and of thick substance, and very fragrant. It is the most splendid autumnal Rose in this country, and of unequalled shape.

NOTES ON NEW OR RARE PLANTS.

ABELIA UNIFLORA.—Mr. Fortune sent plants of this species to Messrs. Standish and Noble from China. It is a small erect shrub, of the natural order of Honeysuckles (Caprifoils), the flowers, as the name denotes, are produced single, in the axils of the upper leaves, each one about one inch long, and three-quarters of an inch across the mouth, white, with a slight stain of violet. Messrs. Standish and Noble consider it hardy. (*Paxton's Flower Garden.*)

ACER CIRCINATUM.—A most beautiful species of the Maple tribe, introduced from Oregon, by the Horticultural Society, perfectly hardy, growing from twelve to twenty feet high. When the leaves unfold in spring they are of a beautiful transparent green (but they are preceded by long leaf scales of a crimson colour), and the flowers at the same time push out in tufts, white and purple. In the autumn the leaves turn to a deep crimson-red, which gives the tree a *splendid appearance*. It is an admirable tree for a pleasure ground, and viewed from the dwelling-house would have a fine effect. The wood is remarkably tough, and the smaller branches are used by the natives in making the hoops, &c., for their "*scoop-nets*," which are used for taking salmon in the Rapids, &c. (*Paxton's Flower Garden.*)

Acer villosum.—Introduced by Messrs. Osborne and Son, of Fulham, from the Himalayan Mountains of India. It is a fine tree, somewhat resembling the Sycamore, but the leaves are larger, thicker, and of a deeper green; in the autumn they die off a *nankeen* colour. The flowers are fragrant. It is considered one of the finest deciduous trees that has been introduced for many years. (*Paxton's Flower Garden*).

Aerides suavissimum.—A delicate species of orchid, with fleshy-pink coloured flowers, each one about an inch and a half across, at the extremity of each of the sepals and petals is a spot of rose. The lip is pale yellow, tipped with pink. The raceme about a foot in length. It produces a most delicious fragrance. The plant flowered with Messrs. Loddiges, of Hackney, in June, 1849, who received it from the Straits of Malacca. (Figured in *Paxton's Flower Garden*, plate 66.)

Æschynanthus splendidus.—An hybrid raised by Messrs. Lucombe, Pince, and Co., of Exeter. The flowers are three to four inches long, tube-shaped, of a bright orange below, and a vermilion above. They are produced in clusters of twelve to fifteen in each. (Figured in *Mag. Bot.*)

Begonia (Diploclinium) semperflorens.—A native of Brazil. The flowers are white, about an inch across, of no very great beauty, but it continues in flower for a considerable time, winter and spring, which makes it a very desirable plant. It grows about two feet high, and blooms freely. (*Paxton's Flower Garden.*)

Bromelia longifolia.—A native of Guiana, a stove plant, in Mr. Henderson's collection at Wellington Road Nursery. The flowers are produced in a large head-like rich rose-coloured cone, near six inches long, and almost as broad. It is one of the finest of the race. (Figured in *Paxton's Flower Garden.*)

Carragana triflora.—From Nepal, and it inhabits the high Himalaya Mountains, similar to the Whin in our own country. It is a hardy half-evergreen shrub, the flowers are of the pea formed shape, yellow, borne in umbels of three together. It is in the garden of the Horticultural Society at Chiswick. (*Paxton's Flower Garden.*)

Cedronella cana.—A half shrubby hardy herbaceous plant from New Mexico, somewhat like the Stachys tribe. The flower stems grow two to three feet high, having long spikes of rosy-red blossoms, which are produced in numerous whorls. Each tubular flower is nearly two inches long, and from ten to twelve blossoms are in each whorl. The plant has many spikes of its blossoms, and blooms freely during the whole of summer, making a handsome appearance. It is a neat compact growing plant, and deserves to be in every flower-garden. It is in the Royal Gardens of Kew. (Figured in *Bot. Mag.*, 4618.)

Cheiranthus splendidissimus.—This fine new Wallflower has long spikes of large blossoms, of a deep orange, shaded with brown. We have seen it exceedingly fine this season.

Crocus vernus: var. Leedsii.—Edward Leeds, Esq., of Manchester, has paid much attention to this lovely tribe of vernal flowers, and the present variety was one he raised and selected out of many thousands. The flower is of fine form, almost tulip shaped, petals stout, admirably rounded off at the top; they are of a rich deep violet-purple, edged with white, which produces a beautiful contrast. It is a vigorous and abundant bloomer, and ought to be grown, along with others, in every garden. (Figured in *Mag. Bot.*)

Damara obtusa.—A native of the New Hebrides, where it grows to a great tree. It is a coniferous tree, requiring to be in a greenhouse with us. The leaves are about four inches long, and one and a half broad, with the ends *rounded* off. The cone three inches long, by about two in diameter. (*Journal of Horticultural Society.*)

Dendrobium cucumerinum.—This most singular orchideæ was received at the Royal Gardens of Kew from Australia, where it was found creeping and running prostrate over the trunks or branches of trees. The stems are branched about as thick as a small goose-quill, flexuose and jointed. The flowers are produced in racemes, three to five in each. Sepals and petals narrow, of a creamy-white streaked with purple. Each blossom an inch and a half across. The very remarkable feature of the plant is, that the leaves (or pseudo-bulbs) bear a most striking resemblance to small girkin-cucumbers, about an inch and a half long, and being produced in vast numbers, have a very interesting appearance. It thrives best in the Royal Gardens in a house, or pit, that has no more artificial heat than what just keeps out the frost. (Figured in *Bot. Mag.*, 4619.)

Geissois racemosa.—A native of New Caledonia, where it grows to a small tree, bearing the flowers, which are of a crimson colour, on the *old wood*, in racemes about a foot long, and the blossoms are packed closely together (similar to those of Combretum grandiflorum), with globular buds, four ovate leathery sepals, shaggy, with hairs in the inside, and eight stamens, with crimson filaments about an inch long, producing a most magnificent effect. It flourishes in the stove, and is considered the finest hothouse plant which has been introduced for many years past. It is in the garden of the Horticultural Society at Chiswick.

Hesperis matronalis fulgida plena.—This is a double Rocket, with flowers of a fine crimson. A very handsome acquisition to this pretty tribe, and will produce a striking contrast with the double yellow and double white. They merit a place in every flower-garden, and can be procured cheap.

Klugia Notoniana (Synonym, Glossanthus Notoniana, and Wulfenia Notoniana).—A native of the East Indies. A succulent herbaceous annual plant, of a decumbent habit, producing roots at the joints of the underside of the stems. The flowers are produced in many flowered racemes. Each blossom is drooping, nearly an inch across, of a rich very deep blue, with yellow at its base. It blooms freely in the stove from September, in the Royal Gardens of Kew. (Figured in *Bot. Mag.*, 4620.)

LINDLEYA MESPILOIDES.—A half-hardy evergreen tree of small size, very much like Mespilus grandiflora. The flowers are white, an inch across, as sweet as the Hawthorn. Introduced by the Horticultural Society.

PENTSTEMON VARIABILIS.—Mr. Salter, of Versailles Nursery, has raised this pretty variety, we recently saw it in profuse bloom. The ground colour is of a light cream, shaded with rose, and streaked with crimson. Some of the flowers were wholly of a rose-red colour above, and cream colour beneath. In fact, as its title imports, the blossoms are very various. It is a pretty addition to this charming tribe.

PHILESIA BUXIFOLIA.—Messrs. Veitch obtained this half-hardy shrub from Chiloe. Mr. Lobb informed them, " In its native country it forms large masses on trunks of trees and rocks. It is a splendid thing, seldom found to grow a foot high. The flowers are produced near the ends of the shoots, they are bell-shaped, and are sometimes as large as the common Tulip, of a deep rose colour. The petals are thicker in substance than any other flower I have seen. I have traced it from the level of the sea to the snow-line, and it blooms more freely at a great elevation." (*Journal of Horticultural Society.*)

SAXIFRAGA FLAGELLARIS. SPIDER-LEGGED.—Captain Penny, commanding the ship " Albert," in the expedition in search of Sir John Franklin, and his intelligent medical officer, Dr. Sutherland, collected in the Arctic regions a box full of various living plants at Cornwallis Island, and sent them to the Royal Gardens of Kew but a month ago. Among them was this curious and rare Saxifrage in a *flowering* state. It is a diminutive plant, and from the small carrot shaped root there diverges, in all directions, a number of thread-like stolones (stalks), each bearing young plants at the extremity, which sends down radicles into the ground, and thus plants a colony of new individuals around the parent. From the crown of the root rises an erect leafy *stem*, with crowded roseate leaves. At the summit of the stem is sometimes a solitary blossom, and sometimes a cluster, or umbel, of from three to five. Each blossom is about three-quarters of an inch across, of a *bright yellow* colour. It inhabits, too, Melville Island and Behring's Straits, and is generally buried under snow for ten months in each year, in a dormant state. The sailors of the Arctic Expedition gave it the appropriate name of the Spider-plant. (Figured in *Bot. Mag.* 4621.)

THE AUGUSTA ROSE.—Messrs. Thorp, and Co., Nurserymen, of Syracuse, New York, have obtained a very superb *yellow* flowering *climbing* Rose. They state, " the flowers are of a deeper yellow than those of the Cloth of Gold Rose, and deliciously fragrant. It is a vigorous climber and *profuse* bloomer. Plants of this valuable acquisition we expect soon in England."

THE AMAZON, *Scarlet Geranium* (Pelargonium).—Rich scarlet, trusses large, petals thick substance, and of excellent form. It is in Messrs. Low and Co.'s collection at Clapton Nursery.

ULLUCUS TUBEROSUS (Synonym Basella tuberosa).—A native of Peru, where it grows on the mountains. The inhabitants eat the tubers, which are about the size of a nut, and some of them were sent into this country when the disease was so prevalent among the potatoes, with an expectation that it might prove to us an excellent substitute. The tubers are of a rich yellow colour, of firm and waxy substance. It is a succulent herbaceous plant, growing luxuriantly in the open ground in summer. The tubers require to be treated as is done to the potato. The flowers are small, yellow, produced in short racemes. (Figured in *Bot. Mag.*, 4617.)

WEIGELIA LUTEA.—The handsome W. rosea has now a pretty companion in this yellow-flowered one, both deserve a place in every shrubbery, or trained to a wall; in a warm place they bloom profusely and beautifully.

Plants now in bloom in the Royal Gardens of Kew, and other places visited.

ACACIA UNDULÆFOLIA.—Leaves small, oval; and the flowers are produced in long spikes, very numerously, of a rich yellow colour. A neat plant of great beauty when in bloom.

A. UROPHYLLA.—Leaves broad; the flowers in branching panicles, white.

A. SMILACIFOLIA.—Leaves small, willow-leaved, and the flowers borne profusely, white. These contrast prettily with the yellows.

A. ERIOCARPA.—Neat small foliage, and the blossoms of a rich yellow, produced in profusion. Very pretty.

A. SQUARROSA.—Leaves small. Flowers in large heads of a deep yellow.

A. BIFLORA.—Very neat small foliage, and blooms freely, the blossoms a rich yellow. Very handsome.

A. DEPENDENS.—Leaves small, branches drooping, flowers sulphur colour. Neat and interesting.

EPACRIS AUTUMNALIS.—Tube of flower one inch long, a vivid crimson. Very handsome.

E. MAGNIFICENT.—Tube one inch long, of bright rosy-pink, tipped with white. Handsome.

E. NIVEA.—Three-quarters of an inch long, bell-shaped, white. Very pretty.

E. ARDENTISSIMO.—Tube one inch long, of a rich brilliant crimson, tipped with pink. Blooms profusely, very showy.

E. SPLENDIDA.—Bell-shaped, half an inch long, bright rose, tipped with white. Very pretty.

E. HYACINTHIFLORA.—Bell-shaped, three-quarters of an inch long, of a bright rosy-pink, and in profusion. Very handsome.

E. HYACINTHIFLORA CANDADISSIMA.—The form and size of the next previous one, white, in profusion. It is a charming contrast to that variety. Also E. grandiflora.

ERICA CERINTHOIDES MAJOR.—By stopping the shoots, this otherwise naked grower becomes a handsome bush, and we have seen a plant having about three dozen heads of its rich scarlet hairy blossoms, each an inch long. It is very handsome.

E. LAMBERTIANA.—The blossoms are nearly globe-shaped, about a quarter of an inch across, of a pretty light pink. Neat and pretty.

E. VERNIX.—The flowers are about the size of the last one, but of shining orange, with green end, which turns black. Very pretty.

E. COLORANS.—Tube three-quarters of an inch long, white, but the flowers become a deep rosy-pink. They are produced in long spikes, in profusion. Very beautiful.

E. MAMMOSA MAJOR.—The tube is an inch long, white below, and the other part a bright pink. They are produced in large clusters, terminating by a slender shoot. It is very handsome.

E. HYEMALIS.—Tube somewhat bell-shaped, three-quarters of an inch long, the lower part of a rosy-purple, and the end white. Produced in profusion in conical spikes. Very pretty.

E. WILMOREANA.—Tube one inch, rose colour, with a white end; in profusion in long spikes. Very neat and handsome.

E. CAFFRA.—Flowers globular, very small, white, and fragrant. They are produced in such profusion as to appear almost covered with bloom. Very pretty.

E. GRACILIS.—These flowers are a little larger than the last described, of a bright rosy-purple, as profuse as the last, and contrasting nicely together.

E. LINNÆOIDES SUPERBA.—Tube an inch long, purple, with a large white end. Borne in spikes in profusion. Very handsome.

E. ARBUSCULA.—Small, globe-shaped, a rich rosy-lilac, in profusion, covering the plant.

CORRÆA BRILLIANTA.—Tube one inch and a half long, bright red, with a yellow end. Very handsome.

C. SPECIOSA GRANDIFLORA.—Tube one inch and a half long, wide, rich crimson, with green end. Very fine.

C. OCHROLEUCA.—Tube one inch, pretty straw colour. Very neat.

C. DELICATA.—Tube one inch and a half long, white, tinged with rosy-purple. Very neat and pretty.

C. ROSEA-SUPERBA.—Tube wide, one inch long, rose, with white end. Very pretty.

The Corræas are fine things to ornament, during winter, the greenhouse, or sitting-room. Easy to cultivate and free bloomers.

WILLMORE'S SURPRISE PELARGONIUM.—Said to be a Seedling raised from the P. Erubescens, impregnated by a Hollyhock. The structure of the plant is different to anything yet seen in the Geranium tribe. The roots are quite unlike any of the class, and the seed-pods are formed more like a Hollyhock than a Pelargonium. The flowers

Banks's *Expansion* is pretty but not grand. *Conspicua* seems to differ little from *Prince Arthur* (is there any distinction?). *Voltigeur* is fine as regards colour, but are not the sepals curved to too great an angle for true elegance, of which the Fuchsia seems a type. Smith's *Sidonia* is a novelty, and on that account popular, but the colours are not very desirable. *Stanwelliana*, though old, is still worthy of notice. *Splendida* and *Ne plus ultra* are good, if small. *Kossuth* large and coarse, and *Orion* as bad. A few of Henderson's are passable, as *Madame Sontag*, but no more need be mentioned, the above are sufficient. Verbenas in your next Number.

A DESCRIPTIVE LIST OF THE MOST ORNAMENTAL SPECIES AND VARIETIES OF THE CRATÆGUS, OR HAWTHORN.

Aware that many of our readers are unacquainted with a vast number of beautiful new, "or rare," trees and shrubs, which are admirably suited to ornament the shrubbery, pleasure ground, or lawn, we purpose inserting a descriptive list of some of them in successive Numbers of our Magazine, with a view to assist our readers in making a selection to improve their collections.

It now being the proper time to plant the charming tribe of Hawthorns, we therefore give a list of such as are most beautiful, either for flowers, fruit, or foliage, and which merit a place wherever it is practicable to give them one.

The Garland of Flora does not possess a more charming blossomed race than the Hawthorns, nor that yield a more grateful perfume, and whose beauty too is extended, in many instances, from an early period of the year up to its close; the flowers enlivening and refreshing the spring and summer, and the varied beautiful coloured fruits adorning the autumn and winter. On these and other accounts they are estimable. The ancients so considered what they possessed even some thousands of years ago. The Hawthorn was then made the Emblem of Hope, and the young and beautiful Athenian girls brought branches, in bloom, to decorate their companions and friends on their wedding-day, whilst they carried large boughs of it to the *altar*. The *altar* too was lighted with torches made of the wood of this tree, and it formed the *flambeau* which lighted up the future home.

Cratægus apiifolia, Parsley-leaved.—A low spreading tree from Virginia and Carolina, introduced in 1812; flowers white, May and June; fruit scarlet; ripe in October, small; height fifteen to twenty feet. The leaves turn a rich yellow when decaying.

C. aronia.—An erect branched tree, introduced in 1810 from Greece and the Levant; flowers white, in May and June; fruit the size of a *marble, yellow*, agreeable to eat, produced numerously; ripe in August and September; it hangs upon the tree till the leaves drop, often till December; grows fifteen to twenty feet high. A very ornamental species.

C. azarolus.—A low tree, introduced from the south of France in

1656; flowers white, from May to June; fruit, size of the last named species, red; ripe in September; height fifteen to twenty feet. Very ornamental.

C. COCCINEA.—A low tree from North America, introduced in 1683; flowers white, in May and June; fruit rather large, scarlet; ripe in September; height fifteen to twenty feet. The leaves die off *yellow* and *scarlet*.

C. CORDATA.—A close-headed tree, introduced from Virginia in 1738; flowers white, in terminal corymbs, numerous in May and June; fruit scarlet, small; ripe in October; twenty to thirty feet high. Leaves a deep glossy green.

C. CRUS-GALLI.—A low tree from the banks of rivers in North America, introduced in 1691; flowers white, in May and June; fruit rather small, when ripe a bright scarlet; ripe in September, and retains its fruit through the winter. In the South of England it is nearly evergreen, retaining its glossy dark-green leaves much longer than any other species. Spines long, and bent towards the end like the spur of a cock; height fifteen to twenty feet.

C. DOUGLASII.—A shrub, or low tree, introduced from the North-west of America in 1827; flowers white, in May; fruit middle sized, *dark purple*, numerous; ripe till August; leaves in the autumn are of a leathery shining texture, and die off early to a purplish hue; ten to fifteen feet in height; a very distinct and ornamental sort.

C. FLAVA.—A spreading tree of about fifteen to twenty feet high, introduced from North America in 1724; flowers white, in May and June; fruit *yellow*, long, pear-shaped; ripe in October. Leaves decay a deep yellow.

C. HETEROPHYLLA.—A desirable species, probably an hybrid raised between the *Hawthorn* and *C. azarole*. Its flowers are white, produced early, and in great profusion; it retains its fruit and foliage till the autumn frosts; fruit rich deep crimson, oval; height fifteen to twenty feet.

C. LOBATA.—Introduced in 1819, supposed from America; flowers white, produced in loose corymbs, from May to June; fruit *green*, medium size; ripe in October. It forms a low spreading tree.

C MACRANTHA.—An open, vigorous, growing tree, very common in the Northern States of America, introduced in 1819; flowers white, from May to June; fruit scarlet, shining.

C. MAROCCANA.—A handsome pyramidal tree, from twenty to thirty feet high, introduced in 1822, a native of Palestine; flowers snowy white, very fragrant, in May and June; fruit scarlet; ripe in October. The leaves in mild seasons are produced very early, sometimes in the month of January, they are also shed very late. It is one of the handsomest species in cultivation.

C. MEXICANA.—A very handsome species, ten to twenty feet high, and when planted against a wall it retains its leaves through winter; as a standard it is only sub-evergreen; introduced from Mexico in 1824; flowers large, white, in June; fruit rather *larger than a marble*, when ripe pale yellow (not eatable).

C. NIGRA.—A low tree, a native of Hungary, from whence it was introduced in 1819; it produces numerous suckers, and soon covers the surrounding ground with a thicket of bushes, but when grafted it forms a very handsome tree; flowers white, in April and May; fruit black, medium size; ripe in July and August; leaves produced in mild seasons in February or March; height twenty to thirty feet. A very distinct species.

C. ORIENTALIS.—Introduced in 1810 from the Levant, a low spreading tree; flowers white, in May and June; fruit *bright coral-red*, as large as a *marble*, produced *very numerously*, agreeable to eat; ripe in September, and remain upon the tree until after the leaves. A very handsome species.

PRACTICAL EXPERIMENTS MADE, AND THE END SOUGHT FOR OBTAINED.

BY MR. H. STILWELL, OF PINE APPLE NURSERY, EDGEWARE ROAD, LONDON.

IT has been my lot of late to have to do with, and manage, a great number of gardens in and near London; and in so doing I have often been requested to look at the Standard Roses, the cry having been, "Do you, Sir, know, three or four, or more, of the Roses planted last year died." I have inquired as to the time they were planted, and have discovered that in nineteen cases out of twenty, "they were planted in spring, and some as late as April." And why has this been done? because the parties wished to have the Roses to look at through the summer, as they could not bear to see the garden without flowers, and by having only *in spring* determined to have a supply, the late period of planting had operated injuriously on the Roses *then* put in, and failures have followed, and from this circumstance the nurseryman is blamed for (it is said) supplying bad plants; and, in many cases, has to make good the failures by gratuitous substitutes the following *season*. I do not say following YEAR, for my opinion is, we should be careful about *the time* of planting the Rose, as well as many other plants which I shall hereafter notice.

The Rose, like many other plants, I find push their *new roots* into the earth "directly after the formation of the buds on the branches," which most clearly demonstrates that we should attend to the planting business as near to the middle of November as circumstances will admit of; this period is most certainly the best for a successful growth. If we let the sap begin to move, and the formation of *new* roots to have commenced, it operates most injuriously against the plant's establishment, how much more so when planting is deferred till, say February or March, when the new roots will by that time have pushed some length, they then receive a check, which in multitudes of cases prove past recovery. Some writers upon, and growers of, Roses have stated, "Roses will do well if planted in March;" I say they will succeed very far better when planted in autumn, and the new shoots will be vigorous, so as to produce a display of full blown flowers the first succeeding summer or autumn, and this is rarely the case when spring planting is resorted to. I have remarked when late planting takes place, succeeded by dry weather, in order to get the plant to push at all, or if pushed to keep it alive, that a liberal supply of water at the roots is generally given, and this undue supply very often hastens the death of the plant, glutting the roots with wet, which hastens its destruction.

There are four things which must be observed: 1st. Make the hole in which the plant is to be placed large enough to extend the roots fully. 2nd. Do not plant *deep*, but have the roots tolerably near the surface-soil, so that food may readily be supplied from above. 3rd. Let each standard plant have immediately a stake, to which secure it, and prevent its being loosened at the roots by wind, or they will be prevented pushing afresh into the soil; first fix your stake, and then place the Rose thereto, and fill up with soil, and you will avoid damaging the roots. 4th. Have a liberal supply of *well decomposed* manure, that from the cow-yard is preferable, being of a cooler nature.

THE LAURUSTINUS.

> " Now blooms, all amid the rigours of the year,
> In the wild depth of winter, while without
> The ceaseless winds blow ire."

FLORA garnishes the cymes of the Laurustinus with hardy and modest flowers, which seem to say, " I'll tarry with you till your friends return, and cheer the scene with my pale pink buds and pure white petals," with which it ornaments the shrubbery from November's dreary month to the time that Boreas lends to March his strongest breath. We know not how this pretty winter flower stands in the floral language of the Turks; but we find it emblematical of those British fair who desert the brighter scenes of society to cheer the sorrowing day of the lone widow, or cause the bereft parent to mourn his lost hope with less anguish. We will welcome thee, therefore, little Laurus, in the shrubbery, even when the queen of flowers displays her blushing and odorous petals to the sun, because we know thou wilt come with all thy charms to make our winter walks more gay: and much it must be regretted that thy mild charms could not detain the great Napoleon to thy native Elba; then many a widowhood would have been prevented, and the name of Waterloo happily never known to the fatherless child of many a sorrowing mother.

The Laurustine grows naturally also in many parts of the south of Europe, Spain, Portugal, and it is likewise found wild in Barbary. Old authors give it the name of Laurustinus, from a supposition that it was a smaller species of the bay, *laurus;* they, therefore, added the word *tine*, or tiny, small.

We are not able to state the exact time when it was first introduced to this country; but Gerard says, in 1596, that it then grew and prospered very well in his garden at Holborn. He calls it the " Wilde Baie-tree," and " *Laurus tinus.*"

MISCELLANEOUS SECTION.

ERYTHRINA CRISTA GALLI.—Of the many plants that adorn our stoves, one of the most handsome is the coral-flowered Erythrina: the brilliancy of colour, the length of its racemed flower-stems, and its beautiful dark-green foliage, render it a most desirable object for the conservatory, when in bloom. Having grown this plant with success to the height of from seven to nine feet, with from seven to ten stems on a plant, literally covered with flowers, I am induced to offer a few remarks on its cultivation; and if my practice is followed out, the result will amply repay all trouble in its becoming an object of great beauty. After the plant blooms, the stems gradually die down, when it naturally requires a season of rest. According to the time that it is wanted to flower again, shake all the old soil from the roots, and re-pot it in a small pot; then plunge it into a gentle bottom-heat. In a short time it will begin to push out shoots; let these grow to the length of six inches; then select as many strong shoots at an equal distance as you want. If the plant is four or five years old, retain eight or nine stems, and cut the others out close to the root; they will form eyes for next year. Should your plants be young, and only break one or two shoots, pinch off the top when about six inches high, and you will get four or five in their place: they will bloom as free, only not so strong. The soil I use is a strong rich yellow loam two parts, one part rotten cow-dung (if that is not to be had, old mushroom-bed dung will do), and one part peat. Sift the finest out, as the rougher the soil the better; and when mixing it, throw in a portion of silver or river sand to make it porous. When your plant has filled the pot with roots, shift it into the pot you intend it to bloom in; the size I use is fifteen inches by sixteen: crock it well, and lay a little moss or dry leaves over the crocks to prevent the soil frem filtering into the drainage, which is very essential in all plant growing. After potting, give a good watering to settle the soil, and place the plant in bottom-heat again till it makes fresh roots, and begins to grow; then a moist warm place in the stove will suit it best. But by all means keep it growing, and allow no check from want of water, as it requires much water, being a gross feeder. Water with diluted soot-water or manure-water, two quarts to four gallons of pure water. If the plant is kept growing it will soon attain the height I have named. Before flowers expand, or soon after, move the plant into the conservatory or greenhouse. Should a young stock of plants be wanted, the weak shoots thinned out should be placed in pots of peat and silver sand of equal parts, and placed in bottom-heat under a bell-glass; they will readily strike, and when potted off keep them growing fast all summer, and even if possible till the following year, when they will have strong roots. They may afterwards be grown and bloomed in the manner I have stated almost at any season of the year, only the flowers in winter are not so brilliant.—*J. F. Roberts, Botanic Garden, Chelsea.* (*Gardeners' Journal.*)

HORTICULTURAL SOCIETY MEETING, REGENT STREET, DECEMBER 2, 1851.—The following articles were exhibited:—From *Charles Ewing*, gardener to O. F. Meyrick, Esq., of Bodorgan, in Anglesea, Wales, models of garden walls, constructed of upright flat irons and glass, which were much admired. From *Mr. Lawrence*, of Parliament-street, London, common garden watering-pots, with globe-shaped roses. These are found to disperse the water better and quicker than the old-fashioned rose. *Mr. Snow*, gardener to Earl de Grey, sent blooms of a beautiful seedling Epiphydum, raised between E. Russellianum and E. truncatum, a much deeper colour, and better formed than either of the parents. *Mr. Salter*, of Versailles Nursery, sent a collection of the Pompone Chrysanthemums, the produce of crosses between the Chusan Daisy and some of the larger kinds of Chrysanthemums, some of which are very handsome. *Mr. Higgs*, gardener to J. Barchard, Esq., a fine cluster of the fruit of Musa Cavendishii, the cluster consisted of ninety-two fruits, most of which were ripe, and being cut up and eaten proved to be very good. This was from the dwarf variety of this Musa, which is better adapted for small stoves. *From the Garden of the Society*, Muraltia heisteria, three Epacrises, Erica hiemalis, Beaufortia decussata, and some of the Minima and other Chrysanthemums, none of which were named. Mr. Van Houtte sent them, with only the numbers, to the garden.

ON GROWING AND REPLANTING CONIFEROUS TREES, &c.—That plants from the nursery squares are the best, no one will, I think, doubt, if nurserymen would guarantee their safe removal. This, however, would be unreasonable to expect, as few of the choice kinds of Pinus will move with that safety when they attain a large size as to warrant them doing so. It is by cultivating them in pots or crates that nurserymen can guarantee the safe removal of specimens of a large size, where immediate effect is wanted, and warrant their obtaining such prices as are frequently given, viz., ten, fifteen, and twenty guineas for specimens of the rarer kinds of Coniferæ; and without some such system, many a fine specimen would have been lost to the country, as failures from the open borders would have been many and often. This, naturally enough, led to the cultivation of the rarer kinds of Coniferæ, especially in pots or crates; and when care is taken with them from their earliest stage, it may be safely followed without any ultimate detriment to the maturation of the tree. The following is the plan adopted by the Messrs. Knight and Perry, of the King's-road, Chelsea, and Messrs. Lucombe, Pince, and Co., of the Exeter Nursery, and some few others who cultivate this class of plants extensively, which I consider to be the happy medium. Although it is attended with a great deal of trouble and expense, yet the result has been most satisfactory:—They take seedlings of Pinus insignis, Abies Douglasii, Cedrus Libani, and many others of the more plentiful and hardy varieties, from the seed pan or bed, and plant them in nursery rows ten inches apart, in the lines about the same, in a mixture of peat and the common garden loam. Here they are allowed to make their summer's growth, and in October they are taken up, potted, and placed in a cool frame, and kept close until they make fresh roots, when they are ready to send out to their respective customers. In the spring, those that are not sold are again planted out and similarly treated, with more space allowed them in the rows (reserving a few of each sort in pots for the summer's sale), and so they continue until the plants attain such a size as to render it inconvenient to house them. In the latter firm they have open boxes or crates made from eighteen inches to two feet square, and as much in depth (according to the size of the plant), made of elm, one inch and a quarter thick and three inches broad. These are nailed to corner pieces, two feet long, and about four inches broad, leaving alternate openings three inches wide, for the emission of roots into the borders where they are planted. In these crates they have plants from ten to fifteen feet high, which can be moved at any season with the greatest safety, as I can testify, having had occasion to remove a Pinus insignis, ten feet high, and nearly as much through, in the month of June, which was done without the slighest injury to the plant, although we had had little or no rain for nearly two months previous. I have planted a Pinetum here this spring, nearly ten acres in extent, with plants supplied by the latter establishment; many of the specimens are from eight to ten feet high, and, with *one exception*, without a failure, after having travelled between three and four hundred miles by rail, which took ten days to accomplish. Some of the specimens cost my employer from seven to ten guineas each, which had been grown in these crates, and had they been taken from the open borders he would not have risked as many shillings, especially having to travel so far; nor would that firm, on the other hand, have guaranteed to replace every failure. I have seen a plant of the Pinus insignis make a shoot six feet three inches long the second season of removal from one of these crates. It can be seen at Shugborough Park, near Crediton, the seat of J. Hippesley, Esq.—*C. S.*, *Hazelwood Castle*, *York*. (*Gardeners' Journal.*)

FUCHSIA SERRATTIFOLIA, and the varieties FLORIBUNDA, and ALBA, are very valuable winter blooming plants, being highly ornamental for the greenhouse, or sitting-room, from October to the end of March. When the plants have done blooming, cut back the shoots, shorten them and insert the cuttings in sand, place in bottom peat. They soon strike root, pot off into a rich loam well drained, and encourage their quick growth. In July turn the plants out of pots into a warm situated border, soil being tolerably dry, by the middle of October the young flower will be visible, then take them up entire, and repot into a rich compost well drained, placing them in a close frame or pit for a week or two, then remove them to bloom in the greenhouse or sitting-room, and they will be highly ornamental from the beginning of November to March. When these have done blooming, cut in as before stated, and turn the plants into the open ground, repotting them in October. These old plants bloom more profusely than the young ones. Every attention is most amply repaid.

FLORAL OPERATIONS FOR THE MONTH

OUR readers are aware we have not space to give the entire details of management of everything which demands attention in floriculture during the successive months of the year; we must, therefore, condense all subjects, and give but the essentials of the most important tribes of flowers, &c.

IN THE FLOWER GARDEN.

ROSES and Hollyhocks should be planted immediately, or will not bloom well this year. Add *fresh loam* to flower-beds, it always promotes an abundance of flowers, also give manure, leaf mould, &c. Frost paves the path for it to be done without injury to walks or grass. Have all standard Roses, and other like growing plants, well secured by a stake. Nothing is equal to THE ROSE GIRDLE, sold by Mr. Hamilton, 156 Cheapside, cheap and valuable.

FLORIST'S FLOWERS.—Auriculas and Polyanthuses should only be kept *just moist* (not wet), and be *just preserved* from frost. If the embryo flower be affected by frost, it is always injurious; give air, however, on every likely occasion. Sow seed early this month. Carnations, Picotees, and Pinks in pots require to have air freely, but water sparingly Protect from excess of rain. Prepare compost for the former *now*.

Pinks and *Pansies* in beds require that the lateral branches are secured by pegs, from injury by wind; and if it comes on very severe, place a flower-pot over each, taking care to remove them on the first favourable change. Fir or Yew branches, a foot or so high, pricked round or in the bed, is an excellent protection from wind. A sprinkling of soot over the bed tends to preserve Pinks from rabbits and snails.

Ranunculuses and *Anemones* planted last autumn protect from frost. The bed for planting in *next month* should now be turned over for the last time; pick out all worms, and give it a slight sprinkling of lime; then spread the bed evenly, and it will be consolidated by the planting period. *Choice Hyacinths* protect, an inverted garden-pot will do. *Dahlia* roots stored safely from frost are not necessarily secure from decay. The best sorts, if a large stock is desired, will now require potting and placing in the frame. *Tulips* still guard from frost, for they rarely throw up perfect blooms if touched by frost. Divide and replant herbaceous perennials, &c. If autumn sowing of annuals was omitted, now sow some in small pots, place them in a frame, and turn them out in the beds early in April: such will bloom early.

IN THE FORCING STOVE.

Sow seeds of tender annuals, as Cockscomb, Amaranthus, &c., to have them fine specimens for the greenhouse in summer; and Ten-week, Russian, and Prussian Stocks, &c., to bloom early, should be sown in pots, or be sown upon a slight hot-bed; also some other of the half-*tender* kinds, to prepare them strong for early summer blooming.

The Jacobeæ and other Amaryllises, should be repotted; also to have a few early blooming plants of Achimenes, Gloxinias, Gesnerias, &c., they should be started, and when beginning to push, separate and pot singly.

Cuttings of Salvias, Fuchsias, Heliotropes, Geraniums, Anagallis, Hemimeris, Bouvardia, &c., desired for planting out in beds, should now be struck. Lobelias in pots should be pushed, in order to divide and pot singly next month. Now sow Mignonette, to bloom early in boxes or pots, or to turn out in the open borders. Sow in pans seeds of Rhododendrons, Azaleas, Ericas, &c.

IN THE GREENHOUSE, &c.

If Camellias are not regularly supplied with soft, not too cold water, the buds will drop; if too much frequently, that will cause them to drop too. Thin the flower-buds if crowded. Never give heat to Heaths as long as the frost can be kept out by coverings. A few degrees of frost will never injure Cape Heaths, whereas fires are their ruin. Let the air *blow* upon them on all favourable occasions: so with the entire class of *New Holland* plants. Azalea indica required for the purpose of propagation by cuttings, may be transferred to a warm temperature to excite an early growth. Cuttings will be found to root much better *early* in the season than at a later period. Re-pot Cinerarias. Gladioli, Alstrœmeria, Lilium, &c., in pots, should be re-potted. Calceolarias—re-pot seedlings, strike cuttings.

Chrysanthemums now done blooming protect from severe frost. Fuchsias which have been at rest, and *increase* is wanted, force them into shoots to strike from.

IN THE STOVE.

The plants best adapted for forcing are Roses, Persian Lilacs, Azaleas, Acacia armata, Neriums, Gardenias, Rhodora, Heliotropes, Correas, Deutzeas, Mezereums, Coronillas, Cytissus, Ribes, Mignonette, Cinerarias, Sweet Violets, Lily of the Valley, Cactus, Cyclamens, and the old Eranthemum pulchellum with its fine blue flowers, Justicia speciosa, carnea, and flavescens, Gesneriæ Zebrina, Poinsettia pulcherrima, and Aphellandria cristata, are fine winter blooming plants.

BRIEF REMARKS.

GLASS. (*Juvenis.*)—It is true that plants are sometimes scorched where the clear glass is used, but for your new greenhouse have Hartley's rough plate glass, it affords every required advantage that is realised by any other kind, and, at the same time, gives a desirable shade to the plants, obviating the covering with canvass in summer, &c., yet it admits a due proportion of light in winter. Plants flourish admirably under it. It is cheap, too, and may be had one-eighth to a fourth of an inch thick, cut to size desired, 6 by 4, at 2½*d.* per foot.

ROSE-CUTTINGS. (*A Subscriber.*)—The China and similar sections of Roses do not push their buds so early as the French Roses (Gallicas, &c.), and cuttings may be put in the open ground as late as February, and will freely strike root. Cuttings on those kinds of Roses which push their buds early should be put in in September, or as *soon* afterwards as convenient.

Hot-Water Tank. (*Amateur Pot Plant Grower.*)—You intend to strike cuttings of greenhouse and stove plants, and want to know what is the best material to plunge your pots of cuttings in. If you use tanners' bark or saw-dust, and the vapour gets through your floor into it, it will soon rot, and be worse than useless. Coal-ashes, finely sifted, having the dusty part taken from it, is the best material we have met with.

Cantua dependens. (*A Gardener.*)—It does not like much heat, and, when in a stove, is liable to the attack of red spider. In a cool greenhouse, or well-ventilated cool-pit or frame, it flourishes admirably.

Vacant Flower-beds. (*A Clergyman's Daughter.*)—The vacant flower-beds may be made to appear cheerful, by obtaining cuttings from the Holly, either with or without fruit, Box, Lauristinus, Narrow-leaved Laurels, Weymouth Pine Firs, or other *fine* leaved species, Arbutus, &c. These being cut in lengths suitable to the extent of the bed, &c., and stuck in the soil, so as to be firmly fixed, and to compose a 'suitable covering, give them a neat appearance. Each bed of one kind, and the variety of foliage, colour, &c., where there are several beds, produce a pretty effect. Where there are large trees or shrubs, such cuttings can be obtained without damaging them. The shoots will keep their vigour till the end of April, if required, and may then be removed for other summer things. Beds thus filled with cuttings of Evergreens in autumn have a cheerful appearance for several months. If bulbs be planted in autumn in such beds, the Evergreens can be removed just before the bulbous class of flowers appear.

Early Showy Small Flower-Bed. (*Sarah Jane.*)—You request to know what plants will make a show early in the spring, which are to be succeeded by scarlet Geraniums, &c. Early in February fill the bed as follows:—Have a margin six inches broad, of the beautiful single Anemonies, the scarlets, whites, purples, crimsons, and other colours produce a pretty effect: then fill up the bed with *strong tubers* of the white, yellow, and scarlet Turban Ranunculuses. Have a circle of the yellow next the Anemonies, then the white, and the rising centre of the scarlets. These may be procured cheap, and once had are easily kept for many successive years. We have seen beds thus planted have a charming appearance. Crocuses have been tried along with the above, but they went out of bloom too early for the others.

Banksian Rose Pruning. (*Enquirer.*)—In previous volumes we have stated The flowers you had this year (1851) were produced on the shoots which pushed, in 1850. Therefore, thin away the young shoots which push next season, leave only enough to train in, similar to a Peach Tree, and they will supply the flowers of 1853. No winter pruning is necessary, unless too many shoots were left at the summer thinning.

Charcoal, Sand, and Loam.—These, sifted fine together, are found to form an admirable compost to strike *soft-wooded* plants in. They root very quickly, and scarcely does a single one fail.—*Verax.*

Best Climbing Roses.—The most elegant display we ever saw of these charming Roses was in a nobleman's pleasure-ground, where the Rose-garden was an acre in extent, and was surrounded by a broad walk, on each side of which were the best selected climbing Roses planted, and trained to neat festoons. The various kinds were then in full bloom, the colours well contrasted, and the drooping elegant branches in such graceful beauty, that no language can describe.

Carnations and Picotees.—I want a pair each of a few of the best varieties, give me the names of two in each class.—*A Country Curate.*

Carnations.—Scarlet Bizarre: Admiral Curzon and Martin's Splendid. Crimson Bizarre: Puxley's Jenny Lind and Lord Milton. Pink Bizarre: Falconbridge and Sarah Payne. Scarlet Flake: Cradley Pet and Justice Shallow. Rose Flake: Lorenzo and Madame Sontag. Purple Flake: Beauty of Woodhouse and Squire Trow.

Picotees.—Light-edged Red: Dodwell's Mary, and Gem. Heavy-edged Red: Mrs. Norman and Prince of Wales. Light-edged Rose: Mrs. Barnard and Countess Howe. Heavy-edged Rose: Marris's Victoria Regina, and Grace Darling. Light Purple: Ophelia and Matthew's Seedling. Heavy Purple: Hollyoake's Duke of Rutland, and Alfred. Yellow: Topaz and Euphemia.

Mealy Bug in Plant-Houses.—I am aware that many recipes are in practice to cure this almost inexhaustible pest; although, perhaps, nothing new, but not generally known, I give the result of an experiment tried with spirits of wine. Those plant-growers that are troubled with this insect would do well first to wash their plants with a mixture of soft soap and warm water, made to a lather. After washing off all you can, procure a small paint-brush of a fine quality, dip it carefully in the spirits, and brush well all the joints and crevices in the stems and leaves. In a day or two look over again, and the few eggs that may have escaped will then have become hatched, and another application or two will completely eradicate them. The spirits ought to be used with great caution, according to the constitution and texture of the plant and leaf. If delicate, dilute the spirit with a little water; and if strong rough barky stems, add a little spirits of turpentine, say half a-dozen drops to a table-spoonful of wine, for when combined they are very powerful and searching. All plants with hairy leaves, such as some Clerodendrons, &c., require the spirits of wine diluted; and others, such as the Coffea, Laurel, &c., do not. It will also be found, if the rafters, sashes, and pots of the plants are infested, a moderate quantity of turpentine mixed in hot water, with soft soap, will be very good for washing with; for the turpentine kills all immediately. I find it will not do to wash the leaves of plants with turpentine, as it burns all it comes in contact with. Spirits of wine, if laid on with caution, will also effectually kill the thrip and red spider. In conclusion, I would recommend this practice for fair trial, as I am confident that it will be found good.—*J. F. Roberts, Chelsea Botanic Gardens.*

Victoria Regia in the house in the Royal Botanic Gardens is now rapidly declining, as is usual at this period of the year; the largest leaf which it made during the season was five feet eleven inches and three quarters, the largest is now five feet three inches; the largest flower was fourteen inches, and one which expanded on this day week measured only eight inches. The number of flowers produced during the season has been, since February 5th, when the first flower appeared, seventy-one, and the number of leaves eighty-one.

Propagating Roses by Cuttings.—It is generally believed by amateurs and others that Moss, Provins, French, Damask, and Bourbon Roses, are difficult to increase by cuttings, but by the following method these sorts may be raised in abundance. Let a bed of well fermented stable litter and leaves be made by the side of a north wall, and place a one or two-light frame on it, so as to face the north. In this put about eight inches of leaf mould, that has been previously well soaked with water, then spread over all about three inches of sharp pit sand, and make the whole firm and level. The back part of a span-roofed pit, running east and west, with a wall in the centre, is also suitable for the purpose. It should be filled to within a few inches of the glass with the same kind of material. In selecting the cuttings, tolerably weak wood of the present year's growth should be taken, if it is sufficiently ripened at the base, or has made one full-formed leaf. Strip the cuttings with the finger and thumb, and smooth the base, reserving the detached portion of the parent bark, cut them close above the first leaf, and insert them in the sand, but not so thick that their leaves will overlap one another. Whon this is finished, the bed should be watered, to settle the soil about them, and they should have plenty of air for the first four days, but it ought to be lessened by degrees, so as to gradually inure them to a confined atmosphere. As the preservation of their leaves in a healthy state is essential to success, the bed may be formed and the cuttings put in on the same day, without waiting until the material becomes heated, as a thin covering of cellular tissue should be formed over the wounded end of the cutting before that takes place. In the third week, the greater part will be rooted, and in the fourth they should be potted off into sixty-sized pots, in a soil composed of leaf mould and loam. They should be afterwards removed into a damp frame or pit, without any water being given to their roots; but they may be slightly sprinkled over their leaves, and when they become well rooted in the new soil, they may be hardened off, and either shifted into larger-sized pots, or planted in a sheltered border, where they will make fine plants for next year. By again levelling the surface of the bed, and making the cuttings to two eyes, always preserving one leaf, Tea-scented, China, Noisette, and Boursault Roses, &c., will root freely in it, without any further preparation; but if a considerable quantity of the first-named sorts are required, either the old bed should be taken down, and a little fresh fermented dung added, or a new one should be made, using the same sort of materials as are recommended above. The young wood should be taken before the blooms are expanded, and the cuttings prepared similar to what I have already described. The young shoots of what is called the second growth may also be used for cuttings. They should be taken when two full-formed leaves are made, smoothed at the base, and cut down to the first leaf, and then planted in a bed of the same construction as above. When they are rooted, they may be hardened off, and allowed to remain in the bed until spring. Plenty of air should be admitted in favourable weather. In this way they will occupy less room than when placed in pots, and they will stand the winter better. Cuttings of Roses, like those of many other hard-wooded plants, are more certain of rooting when they are made short, especially if a healthy leaf is attached to them, and kept there till they are rooted. This, however, can never be accomplished, if the soil in which they are placed is subjected to the alternate action of wet and drought; but by placing wet leaf mould between the dung and sand, an uninterrupted supply of moisture is obtained, and no water is required from the time the cuttings are put in till they are rooted in the pots. So suitable is this treatment, that when the bud at the axil of the leaf has been damaged, or is otherwise abortive, those at the root are excited, and suckers are produced. All kinds of Roses will root freely under this treatment.—*Midland Florist.*

Blocks for Orchids.—After some years' experiments, I find that the best of all possible blocks on which to grow Orchids, are formed from the root of Elder. They must be allowed to dry, so that the bark strips off, and they should be sawn into suitable sizes. Their gnarled and rugged surfaces appear to be peculiarly agreeable to the roots of Orchids. I have long used Elder for this purpose, finding it by far the most durable of soft woods, and at the same time spongy, so as to absorb due moisture; but it is difficult to obtain it of suitable size and form. The roots which I have only tried during the last year or so, seem perfect, and such plants as Cattleya Mossiæ, Dendrobium aggregatum, and Jenkinsii, soon cover the blocks with their roots, which are thus preserved through winter without the slightest injury. If the bark be retained, minute insects (and I believe young woodlice) harbour and are troublesome; the naked wood is free from these objections.—*J. R.*

Transplanting Evergreens.—In some previous Numbers remarks on the best time to perform this business with the best success has been inserted. From the middle of September to the middle of November, it was stated, was the best period. Last year I had a large shrubbery planted, which was done at the above-named period, and although I had three acres of it, there has not been one evergreen failed. I had a pond close by the shrubbery, and had every plant watered at the time of planting, but have not repeated it, and all have grown admirably. I am fully persuaded the above-named period is the best to plant evergreens in general, whether shrubs or trees.—*A. G. Phillips, Liverpool.*

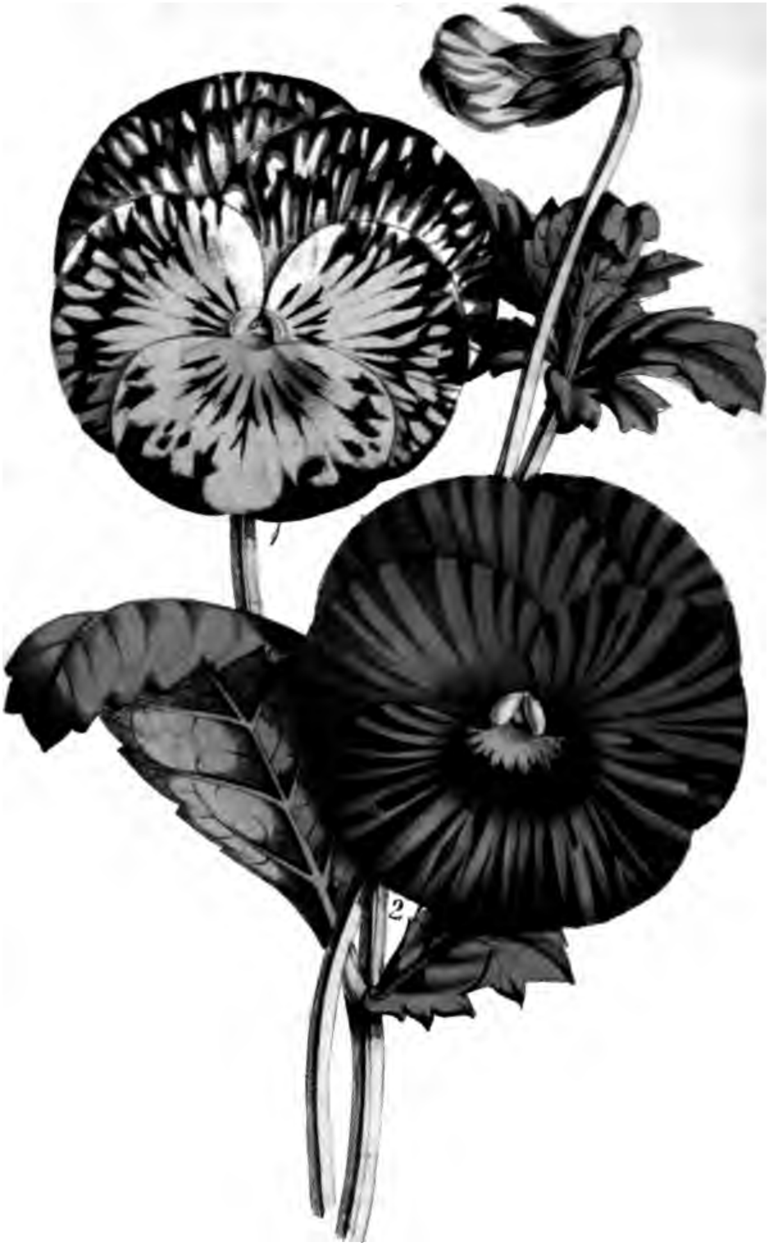
Propagating Chrysanthemums.—During the present month (October) I visited a floral establishment in the vicinity of London, and noticed a vast collection of these fine autumnal flowering plants, just removed into two large double-roofed greenhouses, which had side-sashes to open the entire length (on both sides). The plants were from half a-yard to two feet high, each having from four to six upright shoots well furnished with flower-buds. The plants were clothed with foliage down to the rims of their pots, and in the best health. Struck with the beauty of their growth, I was told by the manager, that old plants had been turned into the open ground in spring, where the branches could be spread at length, regularly around. In June, or early in July, 48-sized pots were plunged to the rim around the plants, near to the ends of the shoots, and one shoot was layered into each separate pot. As soon as it was perceived they had struck root the top of the shoot was cut off, leaving the stem from four to six inches high, this stopping caused the production of side shoots, which were duly secured to sticks, so as to have them grow erect. When the plants had got well furnished with flower-buds, they were cut from the parent plants, and then introduced into the house to bloom. Such uniform, handsome-grown specimens, and so admirably supplied with flower-buds, I never saw before.—*A London Amateur Florist.*

Stacking Ice.—Ice may be stacked—plain English ice, or snow well beaten down into a mass, after the Roman fashion, which answers for all economic purposes every bit as well. This is the mode of stacking ice or snow, which has been found to succeed most thoroughly at Chatsworth:—In the first place, let the owner of the dairy-farm select, not the coolest and shadiest spot, as he inevitably would do without better instruction, but the openest and sunniest, because driest, bit of ground he can find—the sunnier the better. At Chatsworth the first trials were made in shady places, and proved far less satisfactory, because a dry place is required, and the dryness which the sun occasions more than compensates for the temperature of its beams. The platform having been judiciously selected, dig all round it a sufficient trench, which is to contain the water that will, more or less, inevitably drain from the completed stack; let the bank of the trench be lower on the outer side, and, if necessary, a siphon tube may be put in to drain off any excess. The object of the trench is, firstly, to prevent any of the drainage water from spreading over the platform; therefore to keep the platform dry: and, secondly, to preserve this drainage water, which is very cold, and can be used for making butter. Then lay over the whole platform a bed of straw, six or nine inches thick. Straw is a sufficient and convenient non-conductor, and ice wrapped in straw is tolerably well protected from external influence. Upon the straw bed make your stack, building up with sides perfectly upright. The sides are to be thus perpendicular, in order that whatever melts may at once flow into the trench, and not soak into and spoil the ice, which remains otherwise unmelted. If the stack happens to be long, partitions of straw should be inserted at convenient distances, for the protection of one part while another portion is in use. The stack being erected in this manner, coat round the whole outside of it, and thatch it with a straw defence of eighteen inches thick. If you build the stack of snow, build it in the same manner, but take care to batten it down. A stack of ice or snow, so made and so defended, will remain good through the hottest summer, and will obviate the necessity for any ice-house. Remember that all this will be done in mid-winter, when your labourers have comparatively nothing to do; when your horses are eating their heads off, and your cart-tires are rusting from idleness.—*Dickins's Household Words.*

REVOLUTION IN CLIMATE.—It has been an opinion universally adopted of late years, that the generality of our summers are more wet, and consequently colder, and our winters less frosty, and more mild, than they formerly were. This change has taken place since about 1770, and may be attributed to the increased evaporating surface of country, caused by the enclosing of the open fields and wastes; the multifarious intersections of them by fences, especially with hawthorn; and to the increased luxuriance of our green crops, by a general system of improvement in agriculture. To these we may add the increase of pasturage, productive of a serious disproportion between that and tillage; the numerous plantations, especially of foreign trees, whose exhaling power is prodigiously great, and the immense bodies of nearly stagnated water in the numerous canals that have been cut within the above period. The noise and vapour that accompany railway engines have, also, added nothing to the goodness of our weather.—*Cyclop. Magazine.*

GLASS WALLS.—The recent appropriation of glass sides and coping to form hollow walls, provided with wire trellises, under which fruit-trees and flowering-plants may be grown and forced successfully, is, I think, capable of improvement. The inventor, Mr. Ewing, has his models with upright sides, sliding on rollers or opening like doors, this certainly affords some advantage, but it would be much better to have the sides sloping, so as to catch, in the early part of the year, the more direct rays of the sun; and, if desired, a hot-water pipe might be fixed along the front, both north and south. The sliding of the fronts could be as readily constructed in either case. I think many of the fine kinds of large growing stove and greenhouse and half hardy shrubs, &c., might be well grown in such cases; and melons, cucumbers, vines, and fruit-trees would be cultivated most successfully therein, and have a beautiful appearance, and the produce of vegetable fruits would be much greater on trellises herein than in the usual hot-bed frames.—*An Amateur Gardener.*

HARDINESS OF THE JAPAN LILIES.—During the end of last summer we visited Mr. Groom's floral grounds at Clapham Rise, and then saw a complete forest of these charming Lilies, viz., L. lancifolium album, roseum, punctatum, and other varieties, in vigorous bloom in the open beds of his garden. They are treated in all respects as his other hardy Lilies are. Their hardiness being thus established, surely every person with a garden for flowers will find room for some of these most beautiful Lilies, and which can be had at so reasonable a cost.



Fancy Pansies.
1 Novelty, 2 Inimitable.

FEBRUARY, 1852.

ILLUSTRATIONS.

PANSIES.

1. NOVELTY. 2. INIMITABLE.

> " The pretty PANSY then I'll tye,
> Like gems some chain enchasing;
> The next to them, their near ally,
> The purple violet placing."

VIOLA TRICOLOR, is commonly called the Pansy, or Heartsease. The Greek name for VIOLET is ION, and some authors inform us that it was given because Io fed on its blossoms. Others tell us that it was so named after some nymphs of IONIA, who first presented these flowers in their special religious ceremonies.

Hundreds of years prior to the commencement of the Christian æra, the ancients held these flowers in high esteem, so much so, that one of the prizes contested for at the floral games was "a golden Violet;" and its estimation has been continued from that period to the present day, and now it ranks high among the garden's richest perfumes. One of our modern poets sings,—

> " Where fragrant field flowers, gaily spread,
> Drink deep the morning dew;
> Close by a murmuring riv'let's side
> An humble vi'let grew.
>
> " To her the cultur'd spot unknown,
> She bloom'd in her retreat;
> And there in native fragrance bless'd,
> Dispers'd a world of sweet.

"At length a curious florist saw
The sweetly blooming flower;
Call'd her the field's and garden's pride,
And plac'd her in his bow'r.

"And since, in humble station near
That fair *Viola* grew,
Which now the name of *Heartsease* bear,
Whose *power* can *care* subdue."

Another poet celebrates the delightful perfume of their flowers as follows:—

"The Pansy and the Violet here,
As seeming to descend
Both from one root, a very pair,
For sweetness do contend.

"And pointing to a Pink to tell
Which bears it, it is loth
To judge it; but replies, for smell
That I *excel* you both."

The French call the Viola tricolor *Pensée*, which means *a thought*, and from this is derived our name *Pansy*.

The origin of its name Heartsease is thus described by an ancient poet,—

"Ah, cruel love, must I endure
Thy many scorns, and find no cure?
Say, are thy med'cines made to be
Helps to all others but to me?

"I'll leave thee, and to Pansies come;
Comforts you'll afford me some:
You can *ease my heart*, and do
What love could ne'er be brought unto."

This charming flowering plant is a native of Siberia, Japan, and many parts of Europe.

We once saw a field in Yorkshire many acres in extent, closely covered with it, and when in full bloom the appearance was very beautiful. There were numerous varieties in colours, but of the original narrow-petalled form. The fragrance which the mass diffused was delightful, and perfumed the air to some distance around, especially where the breeze prevailed. Since the plant has been introduced and cultivated in the flower-garden, vast has been the improvement in size, form, and variegation. The beautiful specimens shown at our floral exhibitions are ample proofs, and each successive season our florists are producing additional improvements towards perfection in form, &c.; such as suitable size, thick-stout petals, smooth edged, face even, *outline* a circle, at an equal distance on all sides from the eye, and decided colours, each colour being well defined. To the section which have graced our floral exhibitions hitherto, another has now commenced, and no doubt we shall have in addition to singular markings and stripes, an improvement in form each future season.

The two we now figure belong to this section, and which are distinguished as **Fancy Pansies**, similar to what has been done with the **Dahlias.**

The figures which our artist has given are a *trifle larger* than what we saw in bloom during the last season, and the outline appears somewhat better with the lower petals; this may arise from the circumstance of the two flowers becoming more flat when laid down on the paper a day or two for our artist's purposes. They are however beautiful varieties, and deserving a place in every flower-garden. There are, in addition, a number of others which are of very different grounds, stripes and markings, the best being offered for sale, and well merit cultivation, either grown as single specimens or in masses.

Previous volumes contain valuable instructions by our most celebrated growers of Pansies, and our general index, given last month, points out the respective pages.

Novelty was raised by Mr. Salter, of Versailles Nursery. **Inimitable** was raised in France.

NOTES ON NEW OR RARE PLANTS.

Amaryllis blanda.—A very beautiful flowering plant, which has recently bloomed in the collection belonging to Mrs. Bellenden Ker, of Cheshunt. It is a native of the Cape of Good Hope, and succeeds well in an airy part of the greenhouse during winter, drought and dry heat in summer, and will then flower magnificently in September. Whilst kept dry it must not be in a cold situation, or it will not bloom. It is very like the well-known Belladonna Lily. The flowers are of a delicate French white, changing to pink. Each scape has an umbel of twelve or thirteen large flowers. Each of which is five or six inches across, and are most deliciously fragrant. It is a magnificent species. and well merits a place in every greenhouse. (Figured in *Paxton's Flower Garden*, 68.)

Centranthus macrosiphon (Natural Order, Valerianworts).—It is a charming hardy annual from the South of Spain and it is a dwarfish plant, bearing large branching panicles (forming a corymbose head), of rich ruby-rose coloured, Valerian-like, flowers. They are produced numerously and have a very showy appearance. It blooms during the latter part of summer and autumn, which renders it additionally valuable. It is in the Horticultural Society's Garden at Chiswick.

Chrysanthemums.—Pompone, or minima varieties. *Modele*, pure white, one inch and a half across. *Sacramento*, bright yellow, tinged with buff at the tips, one inch and a half across. *Perfectum*, rosy-lilac, centre of a few quilled florets, one inch and three-quarters across. *Asmodie*, copper-coloured, with a yellow centre, and as they age become tinged with red; one inch and three-quarters across. *La Pygmei*, a deep yellow, an inch across, borne in clustered heads, and is very suitable for bouquets. (Figured in *Mag. Bot.*)

DESFONTAINEA SPINOSA. N. O. Gentianaceæ.—Mr. Lobb discovered this very handsome evergreen Shrub on the hills of Patagonia, and sent it to Messrs. Veitch. It has the appearance of a common holly, and is likely to prove quite hardy in our own country. It grows about five feet high. The flowers are tube-shaped, the tube being two inches long, and the terminal border is yellow. Mr. Lobb states that the Shrub blooms in profusion. It is a charming addition to this class of shrubs.

EPIDENDRUM REPLICATUM.—The racemes of flowers are about half a yard long, bearing numerous flowers. Sepals and petals a dull yellow, stained with brown, and a bright yellow edging. The lip is white, streaked with pink. Mr. Rucker obtained it from New Grenada.

ERICA THOMSONII.—A handsome hybrid raised by Mr. Turnbull, gardener at Bothwell Castle, in Scotland, it is a seedling from E. aristata, impregnated by E. cerinthoides. The plant bears a great resemblance in growth to E. aristata, but more vigorous. The tube of each blossom is an inch long, and wide, similar in form to those of E. cerinthoides, and produced in heads of ten or twelve together like that species; of a rich crimson, with darker coloured ribs. It is a free bloomer, and a valuable acquisition.

ERICA MOOREANA, also raised by Mr. Turnbull, from E. retorta-major, crossed by E. Linnæoides. Its habit is much like a dwarfer plant of the last named, but more branching, and a free bloomer. Each tube is near an inch long, of a bright rosy-purple, with a white tip. They are borne in heads of four or five together, and in profusion during autumn and winter. It is a valuable acquisition. (Figured in *Mag. Bot.*

EUGENIA UGNI. N. O. Myrtaceæ.—A charming *hardy shrub* from South Chili, having the habit and appearance of our European broad-leaved Myrtle, and grows from three to four feet high, much branched, and blooming freely. The flowers are globe-shaped, each half an inch in diameter, white, tinged with rose. The leaves are produced in pairs, and a blossom, with a footstalk an inch long from the axil of each leaf, and the young shoots being thus beautifully ornamented renders it a most charming shrub. Messrs. Veitch's introduced it, in whose nursery it flourishes out of doors. (Figured in *Bot. Mag.*, 4626.)

FAGUS OBLIQUA. N. O. Mastworts (Beech-tree like). It inhabits the mountains of Southern Chili. It is a fine *evergreen* tree, growing forty to fifty feet high in its native country. The leaves are more like those of the Hornbeam in form than the Beech, of a beautiful pale green. Messrs. Veitch imported it, and it grows very freely in the open air in their nursery. It is a fine graceful evergreen tree, and a valuable acquisition for the pleasure ground, or margin of a plantation.

GAULTHERIA NUMMULARIÆ. HEATHWORTS.—A very pretty trailing evergreen plant, raised from seed by Mr. Ingram, gardener to Her Majesty at Frogmore. It is a native of the Himalaya Mountains, and requires to be kept in a greenhouse. The stems are slender, leaves small, nearly circular, and the stems as well as the under side of the leaves are covered with stiff brown hairs. The flowers are small, white, which are succeeded by reddish-purple berries. Messrs. Veitch have received plants of it from their collector Mr. Lobb. (*Paxton's Flower Garden.*)

GRAMMATOPHYLLUM SPECIOSUM. N. O. Orchideæ.—It is a stove Epiphyte, which inhabits Java. "The vigour of its growth and extraordinary size of its flowers render it the Queen of Orchids." The late Mr. Griffith found it with a *scape six feet high*, and an *inch* through its stem at the base, bearing a profusion of blossoms, for half its length. Each flower is nearly four inches across and somewhat leathery; the outside is a pale lemon colour; inside a bright yellow, marked very regularly, with numerous roundish-brown spots. It is a magnificent plant, and has bloomed in the collection of Messrs. Loddiges's. (Figured in *Paxton's Flower Garden*, 69.)

GRINDELIA GRANDIFLORA. N. O. Compositæ-asteroideæ. — A native of South America. Seeds were received at the Royal Gardens of Kew, and during last summer and autumn up to November it bloomed in the open flower-bed. It appears to be either annual or a biennial. The plant we saw was four feet high, having a stout stem, numerously branching all the way up, and at the end of each a flower is borne. The entire branches thus adorned composes a corymbous head two to three feet across. Each blossom is of a rich bright orange colour, with a sulphur centre, and three inches across. It is one of the most ornamental flowering plants for the flower garden, and ought to be in every garden. (Figured in *Bot. Mag.*, 4628.)

IMPATIENS CORNIGERA. N. O. Balsaminæ. — Seeds of it were sent from Ceylon to the Royal Gardens of Kew, where the plant bloomed all last summer and autumn in the stove. It grows three feet high, branching much. Each blossom is single, about an inch across, yellowish, deeply tinged with pink. (Figured in *Bot. Mag.*, 4623.)

IMPATIENS PLATYPETALA.—A similar habited plant to the above, with larger flowers, of a violet-purple colour. It is named I. pulcherrima, by Sir William Hooker. It is the finest of this class of Balsams.

LOBELIA COMPACTA.—One of the upright growing, a profuse bloomer, and the flowers of a pretty light blue. Ought to be grown by all.

LOMATIA FERRUGINEA. N. O. Proteads. — A half-hardy shrub from South Chili, obtained by Messrs. Veitch, in whose nursery it grows in the open air. The leaves are doubly pinnate, each, when mature, being from six to twelve inches long. When young, of a beautiful rust colour, afterwards of a deep green. The shrub grows in its native country three yards high. The flowers are produced in short erect racemes, are green outside, and crimson inside.

MACHÆRANTHERA TANACETIFOLIA. N. O. Compositæ-asteroideæ. —A native of New Mexico. It is a half shrubby plant, with tansy-like foliage. It is a tender biennial, flourishing in the open ground in summer. The flowers are aster-shaped, about two inches across, of a purple colour, with a golden-yellow centre. They are pretty, and produced at the ends of the shoots. (Figured in *Bot. Mag.*, 4624.)

MIMULUS ELEGANCE.—Lemon-coloured ground, with crimson-velvet blotches, very fine.

ONCIDIUM SCHLIMII.—Thomas Brocklehurst, Esq., of the Fence, near Macclesfield, purchased this new species at a sale of Mr. Linden's Orchids. A tall rambling plant. The panicle of flowers is long, borne on short racemes along each side of the main stem. The flowers are an inch across, of a bright yellow, having irregular bars of brown. (*Paxton's Flower Garden.*)

PELARGONIUM, SHRUBLAND PET. — This very pretty bedding variety has been raised by Mr. Beaton. Its habit is in the way of Purple Unique, but is very dwarf, a free grower, leaves sweet-scented, and much jagged at the edges. A charming addition.

P. QUEEN OF PORTUGAL.—This is like the Purple Unique in most respects, but a more vigorous grower, and the trusses of flowers are larger, having nearly double the number of blossoms in a truss. Their fine heads of rich purple-velvet flowers are very showy.

PODOCARPUS NUBIGENA.—Mr. Lobb sent this beautiful *hardy* evergreen bush, or tree, to Messrs. Veitch. It is a native of Southern Chili. It belongs to the Taxads (Yews), having linear-shaped, stiff, deep-green leaves. It is a valuable acquisition.

POTENTILLA BICOLOR-GRANDIFLORA.—Flower very large, golden-yellow, with a broad scarlet border, very superb.

PENTSTEMON BACCHARIFOLIUS.—A native of Texas, seeds of which were sent by Dr. Wright to the Royal Gardens of Kew. Plants of which bloomed in the open beds during last summer and autumn, where we saw it in beautiful bloom. It is an *annual*, growing from half a yard to two feet high. The flowers are borne in large terminal panicles. Each blossom is tubular, funnel-shaped, an inch and a half long, of a bright-scarlet colour. It is a very pretty addition to our garden annuals, and merits a place in every one. (Figured in *Bot. Mag.*, 4627.)

RANUNCULUS CORTUSÆFOLIUS (Synonym, R. grandifolius). — The handsomest of all the *Buttercups*. A native of the Canary Islands and Madeira, which is quite hardy. The stem rises two to four feet high, and the flowers are produced in terminal, cymose-panicles. Each blossom is about three inches across, of beautiful glossy-yellow colour. (Figured in *Bot. Mag.*, 4625.)

SALVIA CANDELABRUM.—A native of the South of Spain. It is a hardy perennial, with leaves much like our common Sage, and the floral stem rises a yard high, branching, producing numerous large blossoms, having a greenish-yellow upper lip, and a rich violet lower one. Each blossom is an inch and a half long and an inch across the expanded mouth. (*Paxton's Flower Garden.*)

ROSE PRUNING.

BY MR. H. STILWELL, OF PINE APPLE NURSERY, EDGEWARE ROAD, LONDON.

(*Continued from page* 14.)

IN the January Number I stated the disadvantages of late planting the Rose, and the disappointment resulting therefrom to the extensive cultivators. I shall now notice the *old custom* of Rose pruning at Christmas or even previous to that time.

First, on pruning (so called) the last year's wood, generally left from sixteen to eighteen inches long. To see it thus performed is not a new thing with myself, my almost daily calls at gardens in and around London, supply specimens. The result of such pruning is, that in two or three years the plants are unsightly objects, even past recovery, unless they be cut closely back to the origin of their first shoots, and by so doing, the consequence is the production of a quantity of luxuriant shoots without any flowers. With such improper pruned plants we ought to cut back freely only the worst parts first, and leave the others till the following season. By this method, we shall have some flowers each season, and the defective form may in time be repaired.

I now notice the best time for pruning the Rose, especially Standard and half Standards generally.

I have found, from six years' practice, that the plants never failed in producing a good supply of flowers, being pruned in February, and some of the later pushing in the early part of March. By this time the most severe weather is usually past, and the buds below where I cut to are unmoved and consequently uninjured, but when the plants are pruned at Christmas or earlier, the buds upon the shoots left begin at a proportionate early period to push, and when thus excited, and severe weather occur, the buds are generally injured or wholly destroyed.

Rose pruning is susceptible of three divisions:—*First*, long pruning; *second*, moderate; and *third*, close pruning.

Long pruning should be applied to all *strong growing* kinds. Such should have six of the strongest shoots retained at as regular distances apart as circumstances admit, and be cut back so as to leave four buds, or if the wood be very vigorous, five buds. At the same time cut clean away any dead parts, &c. These remarks more particularly apply to most of the Hybrid China; H. Bourbons; H. Provence; H. Perpetual; H. Damask; and to the Moss, Gallica, or French, &c.

The *second* or moderate pruning requires to have the knife exercised more freely, and only three buds be left on the last year's shoots, care being taken to have the shoots at about equal distances, so as to make the head round and compact.

The *third*, or close pruning, is applied to some of our latest new kinds, for as many of them make but little wood the closest pruning is essential with such.

Under this head may be classed some of the weaker of the Moss Roses, &c.

FUCHSIAS AND VERBENAS.

BY ORION.

(*Continued from page* 12.)

VERBENAS stand very high in the estimation of the flower-loving world. and deservedly so, for what rival have they for filling beds on lawns? What is there that will make a grander display, from early in the season to quite the close? So various are the shades of colour that a splendid parterre may be laid out consisting entirely and exclusively of the Verbena; almost any coat of arms may be copied, yellow is the only *decided colour* wanting; though new ones described as yellow, have been, I think, *dishonestly* sent out, only to prove dirty whites or pale Primroses. But no more need be brought forward to prove the superiority of this many-coloured flower over every other, for bedding and other out-door purposes, but is this position maintained, when brought into contrast with other pot plants for conservatory and sitting-room ornament? We fear it will not then be found to rank so high. It is a flower that is very rarely exhibited "done well" in pots, some few gardeners have succeeded; as, for instance, Robinson's Defiance, when first exhibited, was grown and flowered in a very beautiful manner, but the few cases we could give form the exception to the rule that Verbenas are never seen to advantage at Horticultural Exhibitions. They are sometimes seen in cut bunches, but that is a very absurd manner of displaying floral productions, perhaps forty or fifty trusses huddled promiscuously together into one tube, all individuality gone, swallowed up in one mass of scarlet, blue, or white as the case may be. The generally established rule is to exhibit one truss of each variety, which is very good in its way, but is this a fair exhibition? can the merits of "bedding plants" be judged by a single truss, or even three being staged or boxed? the answer is *No*, and this will account for the large number of *weeds* which have been of late years honoured by a name. A Verbena may justly take a prize *as a seedling*, and yet, afterwards, be thrown away as an absolute worthless *bedding* plant. A very eminent florist, a worthy successor of one who did much for Verbenas in years gone by, showing the writer last summer his collection of upwards of seventy *new* varieties obtained from every raiser, said, to console himself for buying so many, "that there would not be more than ten, or one-seventh part, which he should keep to sell out the forthcoming spring," this should be looked into. Very many of the seventy had prizes awarded, or were distinguished in some way, but as *bedding* flowers they failed to come up to the descriptions which had been so liberally accorded them. The fact is, Verbenas have been dragged in of late years to take rank as a "florist's flower." Heliotropes, Phloxes and other plants are new recruits, and the end of it will be, species will *soon become* rarities; florists enlisting all seedling flowers and hybridizing them to an unlimited extent. This may be done to advantage, provided the habit and uses of the plants be borne in mind, but as instanced in the Verbena, striving to get a *perfectly round flower* with compact truss (not by any means a hopeless case), the required free blooming habit is abandoned, merely to force nature to assume *rotundity*, if we may thus express what Mr. Glenny has been so long labouring to lay down as the only perfection of beauty. It is a curious fact that the better habit the flower the less rotundity of petals is there, and *vice versâ*, the rounder the flower, the worse becomes the habit; to instance this, Smith's Vixen, perhaps the best formed flower yet seen, is of very bad habit, and difficult of propagation, in good sense, well deserving its appropriate name. To sum up, though Verbenas may have progressed as regards *form*, it is to be feared no advance has been made in *colour*, *habit*, &c.; the year 1848, when Mr. Bell, of Norwich, sent out a set which did him honour, has not yet been eclipsed; besides Vulcan, Edmundiana, Duke of Norfolk, Marquis of Douro, Supreme, White Giant, and Petoiana, "all sent out by Mr. Bell," the same season there first appeared, Lady of the Lake, St. Margaret, Captivation, Emperor of China, Anacreon, Defiance, and many others equally good, all of which proved themselves on the bed well worthy of general cultivation. A few good novelties as Eclipse, Princess Alice, Apollon, Wonderful, Sunset, Magnificent, and last, not least, Madame Buenzod, have since been sent out, but not sufficient in the aggregate as "bedders" to equal those of the year 1848. This will go far to prove, that in awarding prizes, *habit* and *freedom of bloom* is not sufficiently considered, and before flowers do have rewards, it should be satisfactorily proved that they are, in *every respect*, worthy of them, that is, when grown either for exhibition, bedding in masses, or ornamental display. Without something of this sort is actually done, amateurs, and even most nurserymen, will avoid buying new advertised flowers, though "received four prizes and six certificates from the National," be appended to each name. In conclusion, the two best *scarlets* for general purposes are Defiance and Sunset; *purple*, Heloisa and Apollon; *white*, Wonderful and Giant; *lilac*, Lilac Rival and Queen; *cherry and pink*, St. Margaret and Anacreon; while Princess Alice and Madame Buenzod distance all others I have seen in the *fancy*, or *dark eyed*, class. The *best formed* flowers, "habit, &c., not considered," have been Model, Comte de Paris, both very old, Vixen, Marquis of Douro, Queen of Summer, Junius, and Exquisite. The French varieties possess more *novelty* but are generally *deficient in shape*. The best of them are Chauverii, John Salter, Gloire de Paris, Pauline, Morphee, Niobe, and Reine Hortense. A new one named Auricula is likely to be in great request, being distinct from anything yet in cultivation, a light blue, with very striking white centre.

REMARKS ON THE MANAGEMENT OF CAPE HEATHS.

BY MR. CHARLES SUTHERLAND, FOREMAN OF THE EXOTIC DEPARTMENT, AT MESSRS. LEE'S NURSERY, HAMMERSMITH.

Observing that a correspondent recently requested some brief remarks on the management of Cape Heaths, so as to have them in a "bushy" state, I forward a few particulars relative thereto, which I trust will be of some service to the individual, as well as other growers of this most interesting tribe of lovely blooming plants. To elucidate the mode of management so as to have *bushy* plants, it will be necessary to commence with the plants at their earliest stage.

The beginner must procure small sized plants of those he is desirous to grow, being careful to obtain them in a *healthy condition*, so that there is a prospect of their continued progress; and they ought not to be more than *two years* old, and such as have had the leading shoot stopped not higher than one inch from the surface of the soil in which it is growing.

On obtaining such plants, examine the roots, by carefully turning them out of the pots, "keeping the ball entire," and if there be plenty of healthy roots, give them a shift into pots that will allow *one inch* (not more) of additional fresh soil beyond the present ball. This process of re-potting should be repeated according as the state of the roots indicate; when such are numerous, and of a *clean* healthy character, then promote their health and growth by an additional shift to the extent as above described. If the plants have been shifted early in spring and properly managed afterwards, they will require another shift about midsummer; this more particularly applies to the quick growing kinds, such as *E. hyemalis, Wilmoreana,* and some of the *ventricosas.* Particular care must be taken not to overshift such kinds as E. tricolor and its varieties, retorta, Hartnellii, &c.

During their progress in growth, attention must be given to train and form the plants as may be desired. To have them *bushy*, however, the hearts of the young shoots must be pinched out when such shoots have extended to a suitable length. This is all the pruning attention that is necessary, and the plant being looked over twice during the growing period, is readily done, and the satisfactory *form* of the plants, as well as the bloom being much more increased in quantity and quality, most amply repays for such attention.

The young plants must not be allowed to bloom till they are good sized specimens, consequently as flower-buds appear, they must be carefully clipped off at their first appearance. If permitted to bloom the plants would be weakened in proportion, but prevented, they are strengthened thereby, and so much earlier they attain to a desirable size and form, and when this *is secured,* then the blooming must be promoted.

With the requisite degree of management in forming the plants, it will be many years before one becomes so unsightly as to require to be *cut in* as it is termed. I would not adopt it, for as young plants are easily obtained from cuttings, or can be generally bought at a cheap rate, "and properly formed," a race to succeed any that may be too large for circumstances, is readily provided, and the others can be dispensed with.

When, however, it is desired to retain an overgrown specimen, and it be of the *soft-wooded* class, it may be successfully cut back to the size required, and a supply of young wood be obtained. If there be too many new shoots produced, they must be duly reduced, and the hearts of those retained be pinched out, as recommended with young plants. "Hard-wooded" kinds do not successfully bear cutting in to any extent, if a trial is made *short pruning* will be best. If proper attention to stopping the young shoots, &c., is given, especially with the hard-wooded kinds, it will be seldom necessary to have to cut in even an old plant. The best time to cut back any large plants is immediately "*after* they have done blooming."

There has been a prevalent opinion, that this charming tribe of plants was most difficult to cultivate, this only arose from the improper treatment pursued by some cultivators. With very little, "but regular" attention to their management, no class of exotic plants is more easily cultivated.

My reasons for recommending such ***small*** plants to commence with, is, "the certainty of their succeeding," which is hazardous with old ones, when they are even obtained in a healthy state. I have known instances where valuable old plants, in a healthy state, have been properly removed to a distant part of the country, where the air, soil, and water have been somewhat different from what they had been *accustomed* to, immediately become sickly and soon die.

If they even survive, under such circumstances, they soon, from loss of foliage, become naked and unsightly. Young plants will succeed, and readily become acclimatized, and inured to the circumstances and situation in which they are placed.

From long and extensive experience with this tribe of plants, I recommend that they be grown in *cold-pit frames* during the summer, the floor having a good bed of cinder-ashes, and the plants not to be crowded, but where a circulation of air can readily go round each. Instead of giving the plants *large* quantities of water during hot, dry weather, give only a *moderate* supply, and, at the same time, "well *soak*" the bed of ashes on which they stand, this will keep the pots in a cool, moist state during the heat of the day. I find a pit frame is much more suitable for the summer situation of Heaths, than having the plants, as is generally done, arranged out upon the open ground, where the sun and dry scorching winds operating upon the pots, greatly damage the delicate fibrous roots, often to the destruction of the plant; but in the pit (not a deep one) the roots, &c., have protection and a suitable atmosphere; besides the advantage of being able to protect the plants from *heavy rains* so frequent in the summer months, by readily placing the "glass lights" over them.

LAURUSTINUS.

BY CLERICUS, SOMERSET.

SOME remarks on the beauty of this shrub were inserted in the last Number of this Magazine. It is a favourite of mine, and I have twenty fine *Standards*, the stems being four feet high, and the heads four feet in diameter. The shrubs are grown in tubs, and they are placed along the sides of a straight broad walk, leading from the dwelling-house to a conservatory and flower-garden. At all times the plants have a pretty appearance, but especially so from November to May during the time they are in bloom. The plants were formed by training up a single stem, divesting it of side shoots as soon as they appeared, and when high enough the head was readily formed. They far exceed the Orange tree in its blooming state, the numerous heads of waxy white flowers expanded, and the red buds of those not open have a charming appearance. Since I adopted this mode of treatment, eight years ago, the same process has been pursued by some of the nurserymen, and plants are now offered for sale.

Two years ago I bought two dozen of Standard Rhododendrons, about the same height as the Laurustinus, and when the latter are going out of bloom, the former are commencing, and I place them between the Laurustinus. Arbutus in bloom and fruit, red and yellow-berried Hollies, are treated the same, and are beautiful through winter.

STRIKING CUTTINGS OF ERICAS.

BY AN EXTENSIVE PROPAGATOR.

The shoots must be the young wood of the present year's growth, the earlier in the spring the better, but may be successful later. They must be *half-ripened* at least, a little beyond the better, but neither *soft* nor *hard.* The ends of leading, or side shoots, be cut off clean, to about an inch, or a little more. The leaves must be dressed off with a small sharp razor, close as possible to the stem, so that not the least part remain. Dress them off about half the way up, as high as they will be inserted in sand. Be careful not to injure the bark of the cutting. Take cuttings from *healthy* plants. Cut each cutting clean, horizontally, close below the origin of a leaf. Insert them in white sand, first moistened and pressed firm; let the *bottom* of each cutting *touch the sand;* if a vacuum is allowed the cutting will perish. Press the sand close around the cutting but do not bruise it. Plunge the pot to the rim in some suitable material, in a cutting frame where there is a bottom heat about *new milk warm,* not more. Either cover with bell, or hand-glasses, or have a small frame placed in a cutting-house as is done at the Clapton Nursery.

With other continuous and due attention, nineteen out of every twenty cuttings will grow. The same kind of treatment with Epacris, Pimelea, Boronia, and similar tribes of greenhouse plants, Azaleas, &c., will be equally successful, striking root with the greatest readiness. As the earlier part of the year is the best for such operations, any late pushing plants should *now* be placed in a higher temperature than usual, to promote the production of proper ripened shoots at an earlier period.

PLEASANT REMINISCENCES OF A FLORAL PARTY.

BY ONE OF THE FIVE.

It was on a beautiful serene sunny afternoon, in the third week in June, that I had the pleasure of incidentally meeting at the house of a friend four ardent admirers of the charms of Flora. The men of our party were of different age, profession, position in life, but they each possessed one point in common. There was a ready response in each bosom when one topic was touched on, indeed there appeared to be no other which could, with any power, enlist the sympathies of all present—need I say that subject was floriculture. The scene of attraction was not the hall, the market, the news-room, or the tavern; it was a quiet unpretending flower-garden, in the south-eastern compartment of which there were stretched out, before the admiring eye, some half-dozen Ranunculus beds in gorgeous bloom.

A bystander might have supposed our party to have been quite aristocratic, for Queens, Princes, Dukes, Governors, and Presidents, were as familiar in their mouths as household words. Again, they might have been suspected of red-republicanism, for no high-sounding titles commanded their respect, the qualities of these personages were extolled or decried in manner most unceremonious. The truth is, the object of the afternoon was to select out of a thousand blooms the twenty-four best adapted for an exhibition; and hence Village Maids and Bonny Bessies were classified on equal footing with Princesses, Lords, and Dukes.

Our friend B., in whose garden we were, had that morning received from a distant grower a postal treasure, in the shape of a box of cut blooms, and this aided to enrich the proposed stand of flowers. Mr. F., in the pride of his heart, conceived he could outmatch the finest of the blooms in his four pets, Chimpanzee, Flaminius, Jane, and Jenny Lind; and as his garden lay within a mile, he started full of hopeful excitement to procure them.

It was agreed that thirty-six of the best varieties should be cut, numbered progressively, and staged; that each of the visitors should have a vote of approval, and be supplied with a voting paper on which the numbers were recorded, and that each person should write off the twenty-four of his selection. The rule in gathering the blooms was, that if any two dissented from the choice the bloom should be rejected. The first sort, which was unhesitatingly selected, was of the edged class, viz., *Sir John de Græme;* its shape, size, and colouring, brought forth the ejaculation, "there's no mistake about that!" Secondly, came a patch of twenty blooms of *Marquis of Hereford*, a splendid crimson, full of petals, of great substance, smooth in margin, high in crown; this was accepted and cut. The third sort had five or six blooms expanded, the yellow was rich and clear, the spots distinct, the substance good, and this one, *Indicator* by name, was approved and gathered. A white flower was next the subject of some friendly disputation, good whites being really scarce. This issue was, that *Wylie's Pearl* was admitted to the ranks of competition. A fifth flower was *Salome*, the sixth *John Waterston*, the seventh the old fashioned, but still unequalled dark-self, *Negro*, or *Naxara*, and so on, up to the complimental number.

The flowers were soon arranged, and the work of censorship commenced. No arguments were used to influence the judgment. The choice was to be unbiassed, and when the votes were declared, the merits of the remaining blooms were to be debated over muffins and tea.

The following list will show the winning sorts, the class to which they belong, and the amount of patronage each one received:—

Name.	Ground Colour.	Marking.	Number of Votes.
Chimpanzee . . .	White . .	Edged . .	5
Indicator . . .	Yellow .	Spotted .	5
Sir John de Græme . .	White . .	Edged . .	5
Pleaser	Yellow .	Edged . .	5
John Waterston . .	White . .	Edged . .	5
Flaminius . . .	Yellow .	Spotted .	5
Marquis of Hereford . .	Crimson .	Self . .	5
Salome	Cream . .	Edged . .	5
Alexis	Yellow .	Spotted .	5
Sir H. Pottinger . .	White . .	Edged . .	5
Enchanter . . .	Yellow .	Edged . .	5
Naxara	Dark . .	Self . .	4
Miriam	White . .	Edged . .	4
Festus	Yellow .	Edged . .	4
Jenny Lind . . .	White . .	Edged . .	4
Princess Royal . .	Cream . .	Spotted .	4
Magellan . . .	Yellow .	Spotted .	4
Larne	White . .	Edged . .	4
Queen Victoria . .	White . .	Edged . .	3
Interestor . . .	White . .	Edged . .	3
Lady Sale . . .	White . .	Spotted .	3
Prefect	Yellow .	Mottled .	3
Splendour . . .	White . .	Spotted .	3
Bijou	Yellow .	Edged . .	2
Pearl	White . .	Self . .	2
Herald	White . .	Edged . .	2
Coronation . . .	Buff . .	Spotted .	2
Mrs. Neilson . . .	White . .	Edged . .	2
Verona	Cream . .	Spotted .	2
Lady Fitzherbert . .	White . .	Edged . .	2
Eliza	Straw . .	Self . .	1
Gulliver	Sulphur .	Edged . .	1
Jane	White . .	Edged . .	1
Alba maculata . . .	White . .	Spotted .	1
Prince Albert . . .	White . .	Spotted .	1
Olympia	Sulphur .	Spotted .	1

The first twenty-four were deemed elected as the best flowers of that day. The result was interesting to the party. The meeting was pleasant and instructive, and I have given a slight sketch of it with the hope it may be the type of many future gatherings.

REMARKS ON BROWALLIA JAMESONII.

BY MR. HENRY LAYTON, SPRING LODGE, LIVERPOOL.

WHEN this handsome, blooming, soft-wooded, evergreen, shrubby plant was first introduced by Messrs. Veitch, and bloomed in their establishment, that circumstance in connexion with the account that had been given of it by its discoverer, Dr. Jameson, in Northern Peru, raised high expectations among this class of plant growers, and it was sold at 1*l.* 10*s.* per plant. Many were purchased, but little being known relative to the proper treatment of it, but few plants bloomed, and those very indifferently, from which circumstance considerable prejudice was raised against the plant.

In your last volume of this Magazine, at page 266, an account of a plant grown, and blooming profusely is inserted. Having a friend residing near the place, I got him to ascertain how the plant had been managed to succeed so admirably. From him I learnt that the great secret with the plant was, "that its flowers are *produced* on the wood made the *previous year*, and especial attention must be paid to have that wood "well ripened" in order to the production of flowers the following season. This is effected by having a tolerable sized plant in February or March, placing it in a house where there is a gentle warmth, and when the new shoots have pushed thin them so as to leave the plant open, re-pot it in the same pot but shake off a good part of the soil, and dress in the roots, again having the plant in a gentle temperature. When their young shoots are about five or six inches long pinch off the leads, this will throw strength into the parts left. Re-pot the plant about midsummer into one a size larger, and if any of the new shoots have pushed leads again, stop them, and in a week or two place the plant out doors in a warm, but airy situation to harden off its new wood. At the approach of cold weather take it into the greenhouse, or DRY pit-frame, and towards the end of December, place it in a forcing-house, same as is done with hardy shrubs that are forced for winter bloom, and the Browallia will bloom profusely, and being placed in the greenhouse will long be one of its handsomest ornaments. A succession of it may be had in later bloom.

MISCELLANEOUS SECTION.

CHRYSANTHEMUMS.—The following varieties have appeared most frequent (in gradation as we insert them) in the various collections shown at the Chrysanthemum exhibitions which have been reported last autumn. Our readers will, however, bear in mind, most of the recent new improved varieties have as hitherto been but in comparatively few hands:—

Defiance, Golden Clustered, Queen of England, Pilot, Annie Salter, the Duke, Beauty, Vesta, King, Phidias, Formosum, Goliath, the Warden, Dupont d'Eure, Lysius, Sydenham, Campestroni, Madame Chauviere, Christine, Madame Poggi, Cloth of Gold, Minerva, Princess Maria, Madame Camerson, Nonpareil, and Orlando. All deserving a place in every collection.

AMERICAN PLANTS.—American plants include certain genera, all belonging to the natural order Ericaceæ; the principal species from which the best varieties have more recently been raised having been originally introduced to Britain from the American continent. They are all more or less beautiful; but the Rhododendron, the Azalea, the

Kalmia, and one or two others, are especially remarkable for their dazzling colours and the profusion of their flowers. But while American plants are unrivalled as objects of magnificent display in the open ground, the shrubbery, or lawn, they are not less remarkable for the facility with which they may be cultivated. For though it is well known that, as compared with other hardy evergreen flowering shrubs, they present one or two features peculiar to themselves, it has been equally demonstrated, by long experience, that they may be successfully managed with only the exercise of ordinary care and intelligence, without which the most elaborate dissertation, or even specific directions, would be of little or no avail. The plants by which a tribe or order is composed are characterized by a particular constitution: this remark is especially applicable to those now under consideration. It has long been known that Cape Heaths, forming the type of the order to which American plants belong, have never been grown in France, Belgium, and many parts of Germany, to the same perfection as in England; and the cause assigned has been chiefly the want of proper peaty soil, without which these beautiful greenhouse and hardy plants will not thrive, however favourable other circumstances may be. This fact, however, has been frequently urged as an argument against the possibility of growing Rhododendrons, and other genera known as American plants, except in a certain kind of peaty soil; and it is unfortunate for the tenability of an opposite position that the objection has derived apparent weight by being associated with isolated cases of failure. Yet nothing can be more erroneous than the supposition that there is any difficulty in supplying them in almost every locality with soil sufficiently fertile for all practical purposes. That some districts are more favoured than others, as respects the composition of soil, cannot for a moment be doubted; and it is perfectly true that a rich well pulverized peaty soil is the most preferable for these plants. But we have only to visit such places as Kenwood, the seat of Lord Mansfield, and others near London, to perceive that Rhododendrons will grow in any kind of good and fertile soil to considerable perfection; and there are many instances in which they luxuriate in what is called a light, friable, fertile loam, of which the much prized peat forms a very insignificant part. But though American plants are not so strictly exclusive in their predilections as may have been supposed, it should not be forgotten that a rich peaty soil is that which most accords with their natural constitution. But it is scarcely necessary to state that this soil may be found more or less plentiful in every county of England. Peat, it must be remembered, is composed of certain vegetable substances, which have undergone a long and slow process of decay. These substances are chiefly the softer portions of forest trees; as leaves. nuts, and tender branches or twigs. Hence it is that in the absence of good peat or bog an excellent substitute can always be readily formed by artificial means; that is to say, by well decomposed "leaf mould" or rotten leaves, and a portion of white or yellow sand. The leaf mould, to be sufficiently decomposed for planting, should have lain in a heap exposed to the action of the atmosphere for at least eighteen months; and even a longer period might be advantageously allowed:

the sand may, however, be used fresh at the time of planting, and mixed with the leaf mould as it is taken from the heap. Another mode for meeting the want of good bog is to prepare a compost in the following manner:—Collect several loads of what is called the top or surface-spit of any plantation, wood, or even grass field, and the more this surface is impregnated with decayed vegetable particles the better. It is not uncommonly found very good in woods and plantations, owing to the decay of leaves and other *debris* peculiar to such places; and the thickness of the "spit" will depend, of course, on circumstances, being more or less according to its composition. When a sufficient supply has been obtained it should be thrown together for several months, and then carefully and freely mixed with leaf mould, old and well rotted dung from a melon frame. In this operation the turfy parts should not be chopped fine, but preserved as rough and large as is compatible with the thorough mixture of the whole mass. Whether the plants are to be placed in beds or compartments of more irregular outline, the average depth may be stated at about twenty inches. To this depth the soil should be taken out, and an equivalent portion of the compost already described placed in its stead. At the time of planting Rhododendrons, Azaleas, Kalmias, or other American plants, should the weather be very dry, nothing is of greater importance than a copious supply of good water, which has been exposed for some time to the weather. Rain water, collected in a pond or tank, is at all times the best for the roots of plants; it is, therefore, desirable to provide some certain means of securing a plentiful supply. This injunction is the more urgent during the first season of planting; for after they are fairly established there is, comparatively speaking, but little to apprehend. In very dry seasons, however, every precaution should be observed to prevent the balls of earth round the roots from becoming dry; an evil to which they are liable in elevated positions. It may further be stated that after the composition and texture of the soil, the next important point in the treatment of American plants, is affording them a plentiful supply of water, and thoroughly draining the ground in which they are to be grown previous to planting.—*J. Waterer's Catalogue.*

REMARKS ON THE CALCEOLARIA.—I am a London exhibitor of this pretty flowering tribe of plants, and having been very successful, I send a few remarks on them for insertion in February Magazine.

Stock.—I strike cuttings in September, and pot off into 60-sized pots about the end of October, and keep them in winter in a dry, shallow plant pit, which has a small hot-water pipe along the front.

Compost.—Equal portions of turfy sandy peat, loam, leaf mould, and well rotted hot-bed dung, incorporated together for a few weeks before using is the most suitable for growing the plants vigorously, I never have the compost sifted, but well chopped with the spade previous to potting.

Potting.—A very free proportion of drainage is essential to their success, and I place one inch deep of broken potsherds, and one inch of moss upon them, and to very large pots I give two inches deep of each: upon this substrata the soil is placed. The Calceolaria imbibes a considerable portion of water by the roots, when it is in a healthy condition; to supply it with a fresh element of it, is therefore necessary. If there be not a free drainage to allow superabundant water to pass, the soil becomes saturated and sour, which occasions sickliness, and often the death of the plant.

The time I *re-pot* my young plants, potted off in October, is about the middle of February; the most vigorous I plant in pots, one foot in diameter and ten inches deep. Weakly plants I put in pots half the size for a few weeks, and then re-pot them into a larger size, as the circumstances of growth require; in pots of this size I bloom my stock generally, but when I see a plant in such a sized pot that would bear a larger I remove it into a size bigger.

The surface soil is frequently stirred to allow water to pass freely, and evaporation duly to rise to the under side of the foliage, &c. *Soft water* is used, hard would soon kill the plants. The soil is kept *moist* but not *wet*. The plants do not flourish if exposed to full sun, they may have early morning sun, but must be in the shade afterwards, say till four o'clock, by such attention mine always flourish.—*John Spencer, Southwick.*

SOIL BEST SUITED FOR CAPE HEATHS, &c.—The soil which the Cape Heaths, and many other fine rooted plants prefer, is called peat, bog mould, heath mould, moor earth, &c., and abounds in sufficient quantities in many places, particularly in uncultivated heaths. But of this soil there are both good and bad sorts, that is, sorts in which plants will grow to perfection, and others in which they languish and decay. Nor is it to be taken for granted that that peat which produces the finest and healthiest crops of our common heaths, such as Erica tetralix, and cinerea, is always a fitting soil to be used for exotic plants of similar habits; for many, by contenting themselves with this test, have found out their error, when too late to remedy it. That peat is best which contains about one-fourth or one-fifth of coarse white sand, and is taken from a dry heathy common, which is never overflowed with water, and off a sub-soil in which the recently-discovered chemical substance, *creasote*, which has deleterious effects upon all vegetables, does not abound. It might be well for the cultivator to have a chemical analysis made of his soil, by which the presence or absence of *creasote* would be determined, and which any respectable chemist would discover for him. When abundance of sand does not naturally abound in the peat, any coarse white sand, *free of irony matter*, may be added. It appears to be of little consequence whether or not good peat be prepared for any previous period in the compost yard prior to using; I rather think that the sooner it is used the better. Never have it sifted, but broke with the hand or trowel. As a substitute for peat, some have recommended very rotten dung, decayed leaves, &c., having a due proportion of gritty sand added; and others have suggested the addition of very rotten manure to be used with peat, with a view to increase the rapidity of the growth of the plants. The former may be used, in default of better, for hardy American plants, but the addition of the latter is by no means to be recommended.—*A Practitioner.*

FLORAL OPERATIONS FOR THE MONTH

THIS month's attention is particularly required to provide plants which shall make the coming floral season's display, *immediate* efforts must be made by sowing seeds, striking cuttings, dividing plants, &c.

IN THE FLOWER GARDEN.

Rose-trees must be planted directly, or success is hazardous. Prune the open-air kinds of the *hardy class* now, and the tenderer sorts next month. Perennial and biennial plants in the flower-bed may be divided. Plant out Hollyhocks and any of the biennial plants. Pink beds: see that the plants remain secure. Carnations and Picotees: if mildew attacks the leaves sprinkle with sulphur. Manures should be laid over the roots of Roses, removing a few inches of the earth, filling up the hollow with well-rotted cow or hot-bed dung, and sprinkle it over with soil, so that it may not dry.

About the middle of the month, if the weather be dry, plant Ranunculuses and Anemones five inches apart, an inch and a half deep from the crown to the surface; and if the soil be dry, after planting, press the surface with a flat board. Be careful that Tulips be firmly secured in their positions, so that they be not damaged by wind. A small protection against strong wind should be provided on the bed side most exposed. Heartsease should have a similar protection. Now is the time to make a plan of the flower-garden, parterre, &c., and to mark each bed with the kind of flowers required, and then to prepare a stock to furnish accordingly, whether from the sowing of seed or otherwise, as with Verbenas, &c. Protect the early buds of Tree Peony, &c.

IN THE FORCING STOVE OR FRAME.

Sow seeds of the tender annuals, as Balsam, Amaranthus, Cockscomb, &c., in pots, and the half-hardy kinds, as Asters, Stocks, &c., either in pots or upon a bed of soil, &c.

Cuttings of Fuchsias, Alonsoas, Ragwort, Calceolarias, Cupheas, Salvias, Heliotropes, Geraniums, Lotus, Bouvardias, Anagallis, Verbenas, Petunias, and such like plants, for the open beds in summer, should immediately be struck, or the plants will be too weak to answer the purpose. If cuttings were put off in autumn, they should now be potted off singly into small pots, any long ones amongst them should be stopped, to induce laterals and make bushy plants.

Dahlia roots should be immediately put to force for stock, and seed be sown in pots. Lobelias be potted singly to have them vigorous by turning-out time. Boxes and pots of Mignonette for succession should be sown. Achimenes, Gesnerias, Gloxinias, &c., be introduced, to promote their immediate growth, and as soon as they have pushed, pot them, singly. Amaryllis, &c., be excited in like manner. Pot Tigridia pavonia and T. conchiflora into small pots. Sow seed of the Chinese Primrose, and as soon as the plants are fit to pot off do so in a rich compost; keep them in heat for a short time, and never water them over head. Calceolarias be encouraged, to have them large; they, as well as Cinerarias, succeed best when grown in a warm, moist, airy pit-frame, kept at about 56° of temperature. Fuchsias required for exhibition should now be cut in, so as to have them a good shape, and after having pushed a little, be re-potted, thinning away all unnecessary shoots.

IN THE GREENHOUSE, &c.

Pelargoniums, to be superb specimens, should be re-potted into their blooming pots (read the several Articles on their culture in previous volumes); they must have a free circulation of air around the plants; it gives vigour to the shoots and prepares them for a higher temperature afterwards without injury, and a stronger bloom is produced. The one year old plants headed down last autumn will have produced young shoots, now a few inches long; thin them. In order to have a succession of bloom, now stop the shoots; this will induce the production of lateral ones. which will come into bloom after the first race of plants have ceased, and continue to a late period of the season. A few more plants, stopped a month later, will supply to the end of the year. (See Vol. xvi., p. 199.) The surface soil in all pots should be stirred up; it tends to health. Epacris, Correas, Coronillas, Acacias, Cinerarias, and other plants, will now be coming into bloom; water seldom as possible, but when given let there be as much as will moisten *all* the soil. Ericas will still be inactive, give but little water. If any mildew appear, dust with sulphur. Camellias, too, should occupy an airy part, and the greatest care should be taken to keep the soil in an *equally moistened* state, using water of a temperature equal to that of the house. Give weak manure-water alternate with the other. Alstrœmerias, Lilium speciosum, and others, should be re-potted.

IN THE STOVE.

Old plants of Fuchsia corymbiflora now gently pushed on will come finely into bloom by the first week in May, or, if the season be fine, earlier. Exotic seeds should now be sown (see Articles in former volumes). Specimen plants for exhibitions will require re-potting, pruning, &c. Ixoras should be elevated, so as to be near the glass, in order to set their bloom; they must have plenty of air at all times convenient.

BRIEF REMARKS.

THE TULIP SOLD UNDER DIFFERENT NAMES.—Mr. Slater, in *the Floricultural Review for January*, gives a list of Tulips that have been sent out with wrong names, and in his remarks upon them states, "The Tulip, from its great price, and from its being an especial favourite with all classes, has suffered more from *aliases* than the whole [of other florist's flowers] put together. The Sherwood seedlings raised in the neighbourhood of Derby, from *Rose Vesta*, led the way, by their popularity, to many abuses. If they only travelled a few miles, they were certain to have another name. *Queen Boadicea*, feathered rose, only went to Nottingham (16 miles), when it was called the *Duchess of Newcastle*. *Lady Crewe* travelled with the Duchess, and one name was not sufficient, it got two, *Lady Middleton* and *Mrs. Mundy*. *Lord Hill* got the alias of *Josephine*. *Sir Sydney Smith*, an old variety grown in the south under the following *aliases*, Franklin's Washington, Demetrius, Trebisonde, got to the same locality (Nottingham) and was soon sent out at 40*s.* per bulb under the name of *Magnum Bonum*. *Duc de Savoy*, also a very old variety, selling at the time at 1*s.* 6*d.* per bulb, kept the same aristocratic company, and was changed into *Spencer's Grand Duke*, and sold at 40*s.* per bulb. *Bartlett's Platoff* got into the same company, and was sold out 'as a seedling raised in that neighbourhood,' at upwards of 5*l.* per bulb under the name of *Royal Sovereign*. It also goes under the following aliases: *Page's George IV.*, *Gurnett's Waterloo*, *Duke of Lancaster*, *Victory*, *La Conquerant*, *Defiance*, *Gabel's Glory*, *Charles X.*, and *Strong's Germanicus*. *Leopoldina*, well known as a very old variety, and low priced, got to the same locality, and was sold for 40*s.* per bulb under the name of *Grandeur Touchant*. In the south, the dispersion of the celebrated Clark's breeders caused much confusion."—" *Garrick* has three aliases, *Edmund Kean*, *Shakspeare*, and *Leonidas*, and at one time there were *seven guineas* difference between the highest and lowest price, although it was well known to be only the same variety. *Leonatus Posthumus*, alias *Glencoe*, was selling under the first name at 15*s.*, and under the latter at 63*s.* *Cerise Blanche*, alias *La Tendresse*, *Ponceau Tres Blanc*, and *Madame Catalina*, sold at a difference of 10*s.* 6*d.* each. *Rose Camuse*, alias *Rose Brilliante*, 20*s.* difference, *Polyphemus* has the following names: *Goldham's Albion*, *Brown's Ulysses*, *Brown's Hamlet*, *Brown's Thomas Brown*, and *Nourri Effendi*." [These defects show the necessity of something being done to remedy the confusion which exists. Mr. Slater purposes to give an entire descriptive list of all *aliases* in Tulips, that have come under his notice. As some of our readers may benefit at once by what Mr. Slater has now pointed as errors, we extract it at once from his useful publication. Although Mr. Slater states some parties in certain localities have sent old varieties out under other names, and as *new varieties*, we do think it has been done by mistake, not with an attempt to deceive or defraud purchasers. However, the existing confusion in names should be rectified as far as is practicable, and we think no one more likely than Mr. Slater to accomplish it.—EDITOR.]

POLYANTHUSES.—Mr. Slater further states that the following irregularities exist with these flowers:—Clegg's *Lord John Russell*, sold also as Hufton's Earl Grey, Clegg's *Golden Hero* as Prince of Orange, Hufton's Lord Rancliffe, Hay's Lord Denman, and Sir John Cam Hobhouse. Clegg's *Lord Crewe*, as George Canning. *Sir Sydney Smith*, as Dew's Britannia, Mellor's Lucetta, and Dormand's Lord Duncan. Hufton's *Earl Lincoln*, which is a first-rate flower, has had Lord Rancliffe substituted for it. Mr. Slater is entitled to ours, and the thanks of our readers, for his attempts to remedy these things.

POLYANTHUS.—On two occasions during the last six years, I purchased a select collection of these pretty blooming plants, and in two years after I obtained the collection I had lost the whole. I planted them in 48-sized pots, in a *strong* yellow loam, mixed with some well rotten hot-bed dung, I kept the plants in a single light frame, fully exposed to the sun from ten in the morning to setting, and every attention was given to watering, air, re-potting, &c. Yet with all such care I was unsuccessful. I am so fond of the lovely flowers, that I wish to try again, and have just purchased two dozen plants (ten varieties). I should be greatly obliged by some person who grows it successfully to give me some instructions, as to culture, &c.—*A Cornish Amateur Florist.* [In previous volumes (see Index in our last Number, and in Vol. viii.), some excellent articles upon its culture are given. We observe, however, that the original species in its native locality, only flourishes well where it grows in shade, in woods, under hedges, &c. The early spring sun it will bear, but hot summer sun is destructive to it, and the florist's Polyanthus must have "shade from ten in the morning to five in the afternoon." Generally a place may be found in every garden, where a free circulation of air may be allowed, in connection with proper shade. Dry *hot winds* are injurious to the plants, cool air, under a low hedge, &c., suits in summer, and protection from frost in winter. In a compost of fresh loam, well rotten leaf mould, peat soil, and old rotten (dry) cow-dung, in equal parts, we have seen it flourish admirably and successively for many years.]

Fairy Rings. — Dr. Lantzius Beninga states, respecting these curious phenomena: "The question as to the cause of fairy rings has often been discussed. Without contradicting or questioning the explanations which have been given by other botanists, I will only remark that, according to my own observations, they depend upon the more or less perfect development of the mycelium of the fungi, by which they are produced. The mycelium, which is the vegetative organ of the fungus, grows amongst or upon fallen trees, decayed wood, or, according to the nature of the species, on other decomposing organic substances. If the necessary conditions exist on all sides: that is, if the requisite decaying matters are sufficiently widely diffused, and no mechanical obstructions, as stones, trees, &c., are interposed, the mycelium spreads equally on all sides from the original point of development. This, except in its greater delicacy and fugitiveness, is perfectly analogous to the thallus of most lichens. The more delicate it is the quicker it grows, and the more easily the older portions perish; and while the circumference is in the greatest vigour the central parts are dead, or more or less entirely evanescent, so that it then grows in the form of an always increasing circle. When the time for the formation of spores arrives many pilei spring from it in the form of a circle or ring, or, in other words, the fairy ring is perfect. Most lichens agree with this, not only in the growth of their thallus, but also in the position of their fruit or apothecia; and it is evident in those species whose growth and decay are the most sluggish, as in some *Parmeliæ*, or more especially in some *Peltigeræ*, that they still vegetate and fructify perfectly towards the margin of the thallus, while the centre is entirely decayed. If the thallus is of a very persistent nature, still the progress of vegetation and fructification from the centre to the circumference is distinctly visible. In old specimens the centre is usually free from apothecia (unless where a new superincumbent thallus has been formed, after the decay of the old); then succeeds a ring of large perfect apothecia, and then near the margin of the thallus a circle of young apothecia, which are younger in proportion as they are nearer to the margin."

Death of Professor Dunbar.—Horticulture has met with a severe loss in the death of *George Dunbar, Esq.*, Professor of Greek in the University of Edinburgh. This melancholy event took place on the 6th of December, at his residence, Rose Park, Trinity.

Professor Dunbar has been long known as an eminent horticulturist, and he has introduced many interesting and valuable plants into cultivation. His garden at Rose Park contained many specimens which did credit to his zeal and ability as a cultivator. He was long connected with the Caledonian Horticultural Society, and always took a warm interest in its proceedings. He attended the meetings with great regularity; his name was long on the list of office-bearers, and he was re-elected as one of the Vice-Presidents of the Society at the general meeting, which took place two days before his death. His name is recorded in the annals of Botany by the Indian genus *Dunbaria*, dedicated to him by Wight. This genus belongs to the natural order Fabaceæ; *D. latifolia*, a beautiful scandent plant, was exhibited by Dr. Cleghorn, to the Botanical Society of Edinburgh, shortly before his departure for India.

It is in the department of Greek literature, however, that Professor Dunbar's name is best known. In early life he laboured for some time as a gardener, but an accident, from the effects of which he was lame during the rest of his days, incapacitated him for so active an employment. His attention, accordingly, was thenceforth devoted to literature, and an assiduous cultivation of the classics soon developed those faculties of which, in subsequent years, [he showed himself possessed. Coming to Edinburgh about the beginning of the century, the attainments he had already acquired easily procured for him a situation as tutor in the family of the then Lord Provost Fettes. Having been shortly after selected as assistant to Professor Dalziel, he was appointed, on this professor's death, to the Greek Chair in 1805. The duties of this responsible position he has since continued to discharge with a zeal and ability well demonstrated by a reference to the many eminent scholars which our Alma Mater has sent forth. The published works of Professor Dunbar are all of them too well known to need any lengthened allusion.

Professor Dunbar died in the 76th year of his age, having been born in the village of Coldingham, Berwickshire, in the year 1774. His remains were interred in Greyfriars churchyard, the funeral being attended by a large number of the professors and students of the University.

PROPAGATING CLEMATIS AZUREA, AND C. SIEBOLDII.—Observing that a correspondent recently solicits information on this subject, I beg to inform him, the most common method of propagating these plants is by layers. By securing each bud of the shoots to be layered at a trifling distance below the surface of the soil. they will soon push root, and by the severance of the shoot between the buds, a quantity of plants, equal to the number of buds, will be obtained. A very quick mode of increase, however, is that of grafting them into the stock of the common kind of clematis. A young shoot (not too tender) inserted into a strong stock, soon unites and grows rapidly. Inarching the kinds upon a common and vigorous sort is the most certain and quickest mode of increase, and where practicable should be resorted to. Cuttings of the old shoots are difficult to strike root, and young ones are very liable to damp off.—*James Clarke.*

RUSTIC BASKETS FOR FLOWER-BEDS.—Amongst the many modes and appliances called into use for the embellishment and diversification of the flower-garden, perhaps there are none that deserves a greater amount of patronage than the rustic basket. Its construction is simple and cheap, and it furnishes us with the means of bringing into happy combinations plants of various habits. Of course the size and shape of the basket, which in different situations may be various, must be kept in view. One I have lately used is of the simplest form, being a mere circle constructed with staves of birch or elm, with the bark on: it stands about eighteen inches above, and is sunk as much below the surface of the lawn; its diameter is ten feet, over which are two arches, formed with six iron rods, crossing at five feet above the top of the basket. The centre was planted with Ageratum odoratum; then two rows of scarlet geranium; the edge with the old trailing variety of ivy-leaved geranium; and Tropæolum canariensis was trained over the handles; altogether it had a pleasing effect. The ivy-leafed geranium harmonises well with the rough bark that forms the sides of the basket, to which it should be fastened with a few shreds, to prevent its being broken by the wind.—*P. Scolding, Woodbridge, Suffolk.*

MANDEVILLIA SUAVEOLENS.—In answer to an inquirer, I observe that this *hot-house creeper* "will grow in a greenhouse," but will not bloom *there* in perfection; it requires to be in a higher temperature "*thus*" to flower and it deserves a place in every stove. It flourishes in the following compost: equal quantities of the knobs of turfy loam and turfy peat, with a little silver sand, and good rotten dung, and the addition of a liberal drainage.—*C. Sutherland.*

TROPÆOLUM SPECIOSUM.—In our last volume we noticed that Messrs. Veitch had found this very beautiful flowering plant to grow vigorously and bloom profusely in an American border behind a north wall where the sun does not shine upon it. Their collector, Mr. Lobb informs us, "that in Southern Chili, its native country, he found it growing in *cool shady places.* It scrambles up sticks, bushes, &c., two yards or more high, bearing an enormous quantity of flowers. No doubt it is perfectly hardy in our own country, and if properly grown, its profusion of rich scarlet blossoms will be highly ornamental. The tops die down to the strong perennial root in winter, but that remains uninjured, and pushes more vigorous the following year. It merits a place whenever it can be accommodated with situation.

YELLOW VIOLET (MESSRS. VEITCH'S VIOLA LUTEA).—I should be obliged by any of the correspondents in the FLORICULTURAL CABINET, informing me the best mode of cultivating the Yellow Violet, whether it requires a stove or greenhouse, as I purchased one last spring and it does not grow at all, and I have tried both situations.—*C. R. D.* [It will grow best in the open border in a sheltered situation, or in a pit, and be kept in a plant-pot or frame. Just keep it from frost and too much damp in winter, and from hot sun in summer, and in a compost of equal parts of loam, peat, and rotten leaf-mould, it will succeed.]

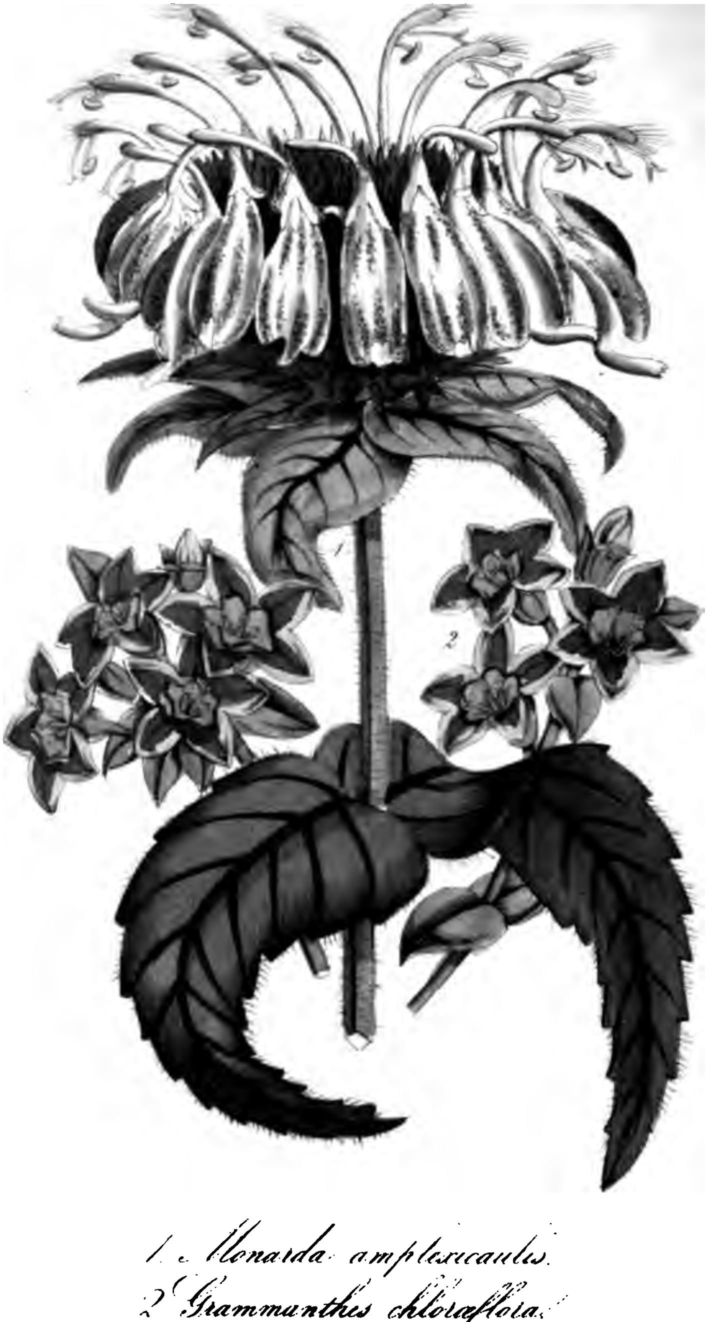
NEW LIQUID MANURE FOR PLANTS.—We beg to inform you that we have used this summer the new patent kopros, prepared from nitrogenous matter in combination with superphosphate of lime, which is very excellent, causing the plants to grow rapidly, but robustly, and turning the foliage of a beautiful dark-green colour. It is altogether well adapted for plants generally; but for those grown in pots it is particularly valuable.—*J. Weeks and Co., King's-road Nursery, Chelsea.*

To stop the bleeding of Plants.—Recently a new unnamed plant has been sent from India to my employer; in unpacking it a shoot was broken, and the part left commenced bleeding very rapidly. Several methods were used to stop it without success. A friend calling upon me during the failure, stated that Roman cement applied to the end of the shoot in its *powdery* state would soon harden and stop the bleeding. I procured some, applied it, and it fully answered. He informed me, too, that he had used it successfully to stop the bleeding of vines; and any cuttings of plants which had a tendency to bleed, he cut clean the lower part of such cuttings, applied cement, and then immediately inserted them in the sand, &c., in the cutting-pot. This not only stopped bleeding, but it tended to induce the rapid rooting of such cuttings.—*A. B.*

Breaking Tulips.—I confess that the rectifying of Tulips is an interesting and "splendid mystery;" but I think their variegation is really and strictly the consequence of poverty, as manuring or rank growing demonstrates beyond all doubt that such an injudicious process renders flowers, *once light* and fine in strain, heavy and badly run. But the greatest point gained is the facilitating their breaking, by remaining so long in the same place, as the breeder colour appears by excess of poverty to be more readily extracted, leaving what we call a rectified flower. As a proof of this, I have broken several, or rather, I have had several beautiful things broken, when first they showed bloom, that was on the fourth or fifth year from seed. There is one fact which I have to make known, hitherto, as far as I know, unknown to all Tulip raisers. It has been so clearly demonstrated to me, that I cannot allow the floricultural world to be ignorant of it: it is that in preparing one of my seedling beds along the side of a line of Apple-trees, say at six yards from tree to tree, opposite and close to the roots of these trees, the number of flowers broken the first time blooming was so striking, when none, or next to none, were found in the intermediate spaces, that I could not overlook it, and therefore I at once concluded, with others of my friends, to whom I pointed it out, that poverty was undoubtedly the grand secret in Tulip breaking.—*William Willison, Flowergate, Whitby. (Midland Florist.)*

How to get rid of Cockroaches.—These are often troublesome in seed-rooms, and it may be of service to state that Mr. Tewkesbury, of Nottingham, has successfully adopted the following method of destruction:—" A few years ago my house was infested with cockroaches (or 'clocks,' as they are called here), and I was recommended to try cucumber peelings as a remedy. I accordingly, immediately before bed-time, strewed the floor of those parts of the house most infested with the vermin with the green peel, cut not very thin from the cucumber, and sat up half an hour later than usual to watch the effect. Before the expiration of that time, the floor where the peel lay was completely covered with cockroaches, so much so that the vegetable could not be seen, so voraciously were they engaged in sucking the poisonous moisture from it. I adopted the same plan the following night; but my visitors were not nearly so numerous, I should think not more than a fourth of the previous night. On the third night I did not discover one; but anxious to ascertain whether the house was quite clear of them, I examined the peel after I had laid it down about half an hour, and perceived that it was covered with myriads of minute cockroaches, about the size of a flea. I therefore allowed the peel to lie till morning, and from that moment I have not seen a cockroach in the house. It is a very old building; and I am certain that the above remedy only requires to be persevered in for three or four nights to completely eradicate the pest. Of course it should be fresh cucumber-peel every night."

Phosphoric Light Emitted by Flowers.—In the garden of the Duke of Buckingham, at Stowe, on the evening of Friday, September 4, 1835, during a storm of thunder and lightning, accompanied by heavy rain, the leaves of the flower called Œnothera macrocarpa, a bed of which is in the garden immediately opposite the windows of the manuscript library, at Stowe, were observed to be brilliantly illuminated by phosphoric light. During the intervals of the flashes of lightning, the night was exceedingly dark, and nothing else could be distinguished in the gloom, except the bright light upon the leaves of these flowers. The luminous appearance continued uninterruptedly for a considerable length of time; it did not appear to resemble any electric effect; and the opinion which seemed most probable was, that the plant, like many known instances, has a power of absorbing light, and giving it out under peculiar circumstances.—*Mag. of Popular Science.*



1. Monarda amplexicaulis.
2. Grammanthes chloraeflora.

FLORICULTURAL CABINET

MARCH, 1852.

ILLUSTRATIONS.

1. MONARDA AMPLEXICAULIS.
2. GRAMMANTHES CHLORÆFLORA.

> "Behold the Lilies of the field, how they grow: they toil not, neither do they spin; and yet Solomon, in all his glory, was not arrayed like one of these."—*Matt.* vi. 28, 29.

FLOWERS! what numerous associations the word brings to the mind! of what countless songs, sweet and sacred, delicate and divine, are they the subject! The admiration and love of them is alike common to the old and the young, the great and the little, the learned and the unlearned, the illustrious and the obscure. Whilst the child takes delight in them, they have proved a source of pleasure and recreation to the monarchs of thrones, as well as to the most profound philosophers, many of whom have been extremely fond of them.

They speak a clear and intelligible language, and have often excited "thoughts that lie too deep for tears," whilst the contemplative admirer has held companionship with them in the shady wood or sunny heath, in the spangled meadow as well as in the hedge-row side, and in that lovely spot "the flower-garden." In each alike they have often spoken to the heart in affection, benevolence, and piety. SOLOMON agreed with such beautiful speech, for his "wise heart" loved the flowers, the LILY especially, as is evident from numerous passages in his SONG. The object of his love, in claiming the supreme dignity of beauty, exclaims, "I am the Rose of Sharon, and the Lily of the Valley."

The eloquence of flowers, however, is not so fully understood as it might and ought to be. One of our poets sings,—

"Put on your brightest, richest dress,
Wear all your gems, blest vale of ours!
My fair one comes in her loveliness,
She comes to gather flowers.

"Garland me wreaths, thou fertile vale;
Woods of green, your coronets bring;
Pinks of red, and Lilies pale,
Come with your fragrant offering.
Mingle your charms of hue and smell,
Which **Flora** wakes in her spring-tide hours!
My fair one comes across the dell,
She comes to gather flowers."

Another gives us the following pleasing specimen:—

"Bowing adorers of the gale,
Ye cowslips, delicately pale,
Upraise your loaded stems;
Unfold your cups in splendour—speak!
Who decked you with that ruddy streak,
And gilt your golden stems?

"Violets, sweet tenants of the shade,
In purple's richest pride arrayed,
Your errand here fulfil;
Go, bid the artist's simple stain
Your lustre imitate, in vain,
And match your Maker's skill.

"Daisies, ye flowers of lowly birth,
Embroiderers of the carpet earth,
That stud the velvet sod,
Open to spring's refreshing air,
In sweetest smiling bloom declare
Your Maker, and my God."

The Emperor Dioclesian preferred his flower-garden to a throne:—

"Methinks I see great Dioclesian walk
In the Salonian garden's noble shade,
Which by his own imperial hands was made:
I see him smile, methinks, as he does talk
With the ambassadors, who come in vain
T' entice him to a throne again.

'If I, my friends,' said he, 'should to you show
All the delights which in these gardens grow,
'Tis likelier far that you with me should stay
Than 'tis that you should carry me away:
And trust me not, my friends, if every day
I walk not here with more delight
Than ever, after the most happy flight,
In triumph to the Capitol I rode.'"

A flower-garden was the residence of our first parents. Of it **Milton** gave the following beautiful lines:—

"Eve separate he spies,
Veiled in a cloud of fragrance, where she stood,
Half spied, so thick the Roses blushing round
About her glowed; oft stooping to support
Each flower of tender stalk, whose head, the gay
Carnation, purple, azure, or speck'd with gold,
Hung drooping unsustained; then she upstays
Gently with myrtle band, mindless the while
Herself, though fairest unsupported flower,
From her best prop so far, and storm so nigh."

The plants we now figure belong to "the flower-garden;" they are very handsome, and entitled to a place in every one.

1. MONARDA AMPLEXICAULIS.

A very distinct and beautiful flowering *hardy* herbaceous perennial plant. It is one of the most charming in the collection of the Botanic Garden at Liege, and one of the most lovely ornaments the flower-garden contains. We have not ascertained its native country.

We have long possessed in our own flower-gardens some very pretty species of Monarda. The *M. didyma* has rich scarlet flowers: it is a native of North America. The entire plant has a refreshing fragrance, and many persons prefer the infusion of the leaves to the tea of China. It is the common beverage of many families of Oswega, a town in the state of New York, and it is hence called the Oswega tea.

There are nine other species, and some varieties, known, having flowers of purple, crimson, rose, lilac, and yellow colours. All are worthy a place in the flower-garden; they are easy of culture, and may be procured at a cheap rate. The flowers, when gathered with stalks, and put in water, will keep fresh for a long time, ornamenting the vase, and perfuming the apartment with a refreshing odour.

2. GRAMMANTHES CHLORÆFLORA.

N. O. Crassulaceæ (Synonym, Crassula gentianoides; Grammanthes gentianoides).—This very neat and pretty flowering plant is a native of the Cape of Good Hope, an annual, remaining in beauty during the entire summer. It is a dwarf spreading plant, rising four or five inches high. It flourishes either grown in pots in the greenhouse, or in patches in the flower-garden. It is an admirable plant for an edging, either for a bed or vase. Seeds should be sown in March, in pots, as is done to half-hardy annuals; the plants be potted off three, four, or more, in a small pot, and, being placed in a close frame for a short time, they soon begin to spread, and when required for the greenhouse or sitting-room window, repot as required. When it is to be grown in the open ground, they must be put out with balls entire early in May. A light sandy soil suits it best; and, being of a succulent nature, care must be taken not to give too much water. It grows freely, and blooms profusely, much like some of the dwarf Sedums. When the flowers first expand, they are yellow, with a blood-coloured V, but afterwards are almost wholly a rich blood colour, with a narrow margin of yellow.

It merits a place in every greenhouse, window, and flower-garden. The flowers fully expand when the sun shines upon them, and then appear like so many beautiful stars. Seeds may now be procured of the seedsmen, although but recently introduced.

NOTES ON NEW OR RARE PLANTS.

Acacia cochlearis.—This is one of the prettiest of this charming tribe. Leaves two inches long. Flowers in globular balls, of a rich yellow, fragrant, and being borne in profusion, in long wreaths, render it very showy. This neat species blooms during winter.

Azalea indica calycina. The long-calyxed Chinese Azalea.—Mr. Fortune sent this plant from China, some time ago, to the Horticultural Society. It has only recently bloomed in the garden at Chiswick. It is closely allied to *A. indica phœnicea*, but the flowers are much larger, being nearly four inches across when fully open. They are of a rich rose colour, strongly speckled with bright crimson spots. It is a showy blooming plant. (Figured in *Paxton's Flower Garden*, 70.)

Azalea myrtifolia. Myrtle-leaved.—Grows on the Black Mountain, in Hong Kong, China, and first seen March 1849, by Colonel Eyre, of the Royal Artillery. A shrub from four to five feet high. Flowers about an inch and a half across, *pure white*, with the three lower petals spotted with *dark violet* specks. A very distinct and handsome species. **Azalea ovata** also grows on the Black Mountains of Hong Kong. The flowers are *white*, with dark *purple* specks *around the centre* on *each* lobe of the flower. Very distinct and handsome.

Bifrenaria Hadwenii (Orchideæ).—A native of Brazil, introduced into our country by Isaac Hadwen, Esq., of Liverpool. It has bloomed in Mr. Hadwen's collection, and also at the Royal Gardens of Kew, on a suspended block of wood in the Orchid House. The leaves are long, a quarter of an inch broad. Each blossom is nearly four inches across; petals and sepals half an inch broad, of a pretty yellow green, beautifully blotched or mottled with a rich brown; lip large-above an inch broad, white, with striped spots of rose. A very handsome species. (Figured in *Bot. Mag.*, 4629.)

Centradenia ovata (Melastomads).—A stove herbaceous plant, from Central America. The flowers are produced in large terminal cymes, of a deep flesh colour. **Centradenia divaricata** is a somewhat similar plant, but more spreading. The flowers are white, but are not so numerous as the other species.

Dendrobium album (Orchideæ).—A native of the Iyamally Hills, in India. The flowers are of a pure white, each being two inches across. Introduced by Messrs. Veitch.

Dillwynia scabra. Pea-flowered.—Mr. Drummond sent seeds of this very pretty greenhouse shrub, from Australia, to Messrs.

Henderson, of Pine-apple Place Nursery, where it has bloomed, and by them exhibited during the last summer, a medal being awarded for it. It is a free-growing bushy shrub, with foliage somewhat similar to a Leschenaultia formosa. It blooms abundantly, and the flowers are produced in terminal heads upon its numerous side shoots. The standard and wings of the flower are red, with yellow claws, forming an eye; the keel is of a deep purple-red. The plant is neat, and when in full bloom very handsome. It merits a place in every greenhouse. (Figured in *Mag. of Bot.*)

ECHINOCACTUS LONGIHAMATUS. THE LONG-HOOKED SPINES.—It is nearly globe-shaped, nine inches across, deeply furrowed, and the hooked spines are five or six inches long. Each flower is nearly four inches across, of a pretty yellow colour. It is in the noble collection in the Royal Gardens of Kew.

GLADIOLUS. VARIETY, WILLMORE'S WELLINGTON.—This very handsome variety was raised in the gardens of J. Willmore, Esq., Wellington-road, Birmingham, along with many other valuable varieties. It is a seedling of the *Natalensis* section, a vigorous grower, and the flowers are borne in long spikes. Each blossom is about four inches long, and as much across the front, of a deep orange-red colour. Very showy, and deserves to be one of every collection.

G. VON GAGERN.—This very beautiful variety is of the *G. Cardinalis* section (which are not so vigorous as those of *Natalensis*). Each blossom is nearly three inches across, rich scarlet, with a broad white stripe on the middle of each of the three lower petals.

G. PRINCE ALBERT.—A variety of the *Cardinalis* section. Each blossom three inches across, of a pretty blush-pink colour, and a white stripe on each of the three lower petals. This and the previous one are equally deserving a place in every collection of this charming tribe. They are figured in *Magazine of Botany.*

The following varieties of the *Natalensis*, " vigorous-growing section," are very superb, erect growers, and have very long spikes of showy blossoms:—

G. Gandavensis superbus, five to six feet high; orange shaded with a deeper colour. *G. Gandavensis aurantius*, bright orange. *G. Gandavensis splendens*, a deep scarlet. *G. Gandavensis coccineus-striatus*, three to four feet high; robust; orange, beautifully striated with orange-scarlet. These are very showy, and fit for any collection. The following have light-coloured flowers, and are particularly handsome: —*G. floribundus superbus*, white, each of the lower petals having a stripe of violet. *G. vernalis spicatus*, French white, striped with rose. *G. albicans roseus*, white, tinted with rose. *G. roseus superbus*, white, delicately shaded with blush. (*Magazine of Botany.*)

HERMANNIA INFLATA.—Said to be a native of Mexico. It is a neat shrubby greenhouse plant, growing two feet high. The flowers are produced from the axils of the leaves, in somewhat bending racemes, about four inches long. The calyx and corolla form a globe nearly half an inch in diameter. The petals are of a dark purplish-red colour.

This pretty purple-flowered will contrast well with the yellow and red-flowering species we have long had in our greenhouses. It flourishes in a sandy loam.

IMPATIENS FASCICULATA.—Seeds of this pretty Balsam were sent from Ceylon, where it grows in the hilly country, to the Royal Gardens of Kew. It is a tall, upright-growing species; the blossoms are of a showy pink colour, each flower an inch across. (Figured in *Bot. Mag.*, 4631.)

IPOMÆA PALMATA.—Captain E. Rooper collected seeds of this beautiful climber in British Kaffraria, and sent them to the Rev. T. Rooper, in whose garden, at Wick Hill, near Brighton, the plant bloomed in 1850; it also bloomed in 1851. In its wild state, it grows trailing over bushes, or climbing trees, growing in sandy soil by the river side. It bloomed so profusely that the leaves could scarcely be discerned, the flowers concealing them. Each blossom is about two inches and a half across, of a rosy-pink, slightly tinged with purple, and having five white stripes (or plaits) extending from the centre of the flower to its margin. It is exceedingly neat and handsome, and ought to be in every greenhouse. It is supposed to flourish, too, in the open air. (Figured in *Mag. of Bot.*)

NICOTIANA ALATA (Tobaccos).—A very pretty flowering tender annual, from Brazil. It grows from four to five feet high, branching. The flowers are borne in racemes. The tube of each is two inches and a half long, and the expanding five-parted end (limb) is an inch and a half across. The blossoms are white, fragrant, neat, and pretty.

PENTSTEMON GENTIANOIDES.—Some years back a species of Pentstemon was sent out under this name, having long, widish, tube-formed flowers of a crimson-purple colour. That is not the *true P. gentianoides*, but it having been discovered by Mr. Hartweg, is in future to be called P. Hartwegii. The true P. gentianoides grows four feet, or more, high. The tube of the flower is short, about an inch, and as much across the expanded wide mouth. It is termed *bell-shaped*, its form being much like a diminutive flower of Gloxinia maculata. The blossoms are of a bright blue outside, tinged with rose inside, and a lighter rim around the throat. The flowers are borne in long spikes, and render it a valuable plant for the flower-garden. It is perfectly hardy. (Figured in *Paxton's Mag. of Bot.*, 71.)

PHALÆNOPSIS ROSEA. THE PINK BUTTERFLY PLANT. (Orchideæ.)—It was found in Manilla, by Mr. Lobb, who sent it to Messrs. Veitch. It is said to have a spike of flowers from half a yard to two feet long. It produces a succession of its star-like blossoms for a considerable period. Each flower is an inch and a half across; the sepals and petals of a pretty rosy-peach colour, and the lip a rich ruby, with the lower portion of the labellum yellow, spotted and streaked with red, It has also bloomed in Mr. Rucker's collection. It is a charming acquisition. (Figured in *Paxton's Flower Garden*, 72.)

SPRING FLOWERS.

BY A DEVONSHIRE MAN.

Early in the last year's volume an article appeared on planting banks, slopes, &c., in woods, plantations, and pleasure grounds, "where walks or paths were constructed," with climbing or trailing Roses of the Ayrshire and other sections. Immediately on reading the remarks I procured a considerable number, at a cheap rate, and every such situation in the vicinity of my house, I had planted as therein directed. This was done the first week in February, and the plants being strong, they flourished admirably, and I had a fine bloom upon the greater part the past season. They were beautifully interesting, and very much added to the pleasures of a walk through the woods and other grounds.

I had also noticed a strong recommendation to plant near every frequented walk or path, *Sweet Violets.* I followed this advice too, and having a quantity of plants in the kitchen-garden, I had them distributed liberally in every likely place. They grew well, and bloomed admirably at a later period than previously-established plants. This spring I expect a profusion of Violets, the charms of which *Bernard Barton* proclaims in the following lines :—

"Beautiful are you in your lowliness,
Bright in your hues, delicious in your scent;
Lovely your modest blossoms downward bent,
As shrinking from our gaze : yet prompt to bless
The passer-by with fragrance, and express
How gracefully though mutely eloquent,
Rejoicing in their own obscure recess
Delightful Flowerets ! at the voice of spring
Your buds unfolded to its sun-beams bright—
And though your blossoms soon shall fade from sight,
Above your lonely birth-place birds shall sing,
And from your clust'ring leaves the glow-worm fling
The emerald glory of its earth-born light."

The yellow, white, purple, and other variety of *Primroses,* were also liberally distributed, in accordance with the taste of a poet, who writing on this flower, says,—

"For thee, I'll rear a bank where softest moss
And tenderest grass shall carelessly combine;
No haughty flowers shall shine in gaudy gloss,
But azure Violets mix their buds with thine."

In the woods, however, the sparkling golden-flowered wild Ranunculus, or Pile Wort, abounds,—

"Buttercups, that will be seen,
Whether we will or no;
Others, too, of lofty mien,
They have done as worldlings do,
Taken praise that should be thine,
Little humble Celandine.

"Careless of thy neighbourhood,
Thou dost show thy pleasant face
On the moor, and in the wood,
In the lane; there's not a place,
Howsoever mean it be
But 'tis good enough for thee!"

I also added a great quantity of the very beautiful little wild ***Veronica chamædrys***, perhaps better known by the name which the poet so strikingly describes,—

"Not for thine azure tint, though bright,
Or form so elegantly light,
I single thee, thou lovely flower,
From others of the sylvan bower;
Thou hast a spell to them unknown,
And this my heart hath captive won.

"Thy *name*, what is it? The very prayer
Affection breathes for friends most dear;
Whate'er their pursuits, hopes, or aim,
Part they, or meet, thy magic name
With silent eloquence may tell
Her soul's fond breathings, '*Speed ye well.*'"

This charming *Speedwell* is one of the loveliest walk-side ornaments. The profusion of its spikes of blossoms of a deep blue with a white eye are truly pretty.

Besides what I have enumerated, I have planted several others in quantities, of which I shall write for the April Number, I must however here observe, that with a little expense, and to myself highly interesting attention, I have formed a paradise of sweets and beauties, and rendered home even more attracting, and truly, "there is no place like SWEET HOME."

Similar attention, wherever practicable, if in a more limited exteut, is most amply repaid.

ON THE ARRANGEMENT AND MANAGEMENT OF PLANTS IN WARDIAN CASES.

BY MR. WILLIAM CHITTY, FLORIST, OF STAMFORD HILL, NEAR LONDON.

IN following up the remarks I offered in a recent number on this subject, I would first of all say it is of importance to have them *well drained* before the soil is introduced. Although in numerous instances no provision is made for the draining away of the superfluous water after the occasional necessary irrigation, and for that reason it may be thought unnecessary to attend so particularly to the matter of drainage as in the culture of plants in pots; yet it will be found highly conducive to the free growth and vigour of the inmates of these CASES to favour them in this really essential particular. It may appear unnecessary to remark in this way, but in several instances that have come under my own observation this matter has been wholly unattended to. Broken pots make a very good drainage; but a more useful material will be found to be sandstone, broken into pieces about the size of a boy's marble. This substance absorbs and retains for a long period the superfluous moisture, and the roots of plants of almost every description delight in twisting about them, and gathering support from them. The "trough" or "case" in which the plants are inserted should be half filled with drainage, over this a thin layer of turf, then a composition, consisting of equal parts of good turfy peat or box earth, well-decomposed leaf mould, and about one-fourth river sand, with a good proportion of sandstone, broken up small and well mixed with the other ingredients, will be found a good soil for almost any plant that will flourish in the close atmosphere and peculiar conditions of a "Wardian Case."

As I hinted in my previous communication, a pleasing diversity of surface may be obtained even in the circumscribed area of one of these cases, by the elevation and depression of the soil; small shells, little pieces of roots, fragments of curious stones, &c., tastefully disposed, would contribute greatly to the interest, and many plants would succeed better with such accompaniments.

The foregoing remarks are some that have occurred to me in the course of my practice, and possibly may interest and be of service to some of your readers. To those of them who have been acquainted with the FLORICULTURAL CABINET from its commencement, just twenty years ago, it must afford no small gratification to find that it has outlived the spleen of the Crocuses, the Snowdrops, and Daffydowndillies, who were in bloom every month throughout the first year of its existence, and continues largely to minister to the pleasure and profit of its readers.

REMINISCENCES OF GARDENS, &c., IN 1851.

BY RISCEMARA.

ALTHOUGH the present winter has been remarkable latterly for the absence of severe frosts and cold weather, yet the remembrance of the flowers which enlivened our path during the former year is not without its pleasing influence, and, hoping also to interest others, I am attempting a little retrospect. In the early spring I admired the good effect produced by large masses of the *Virginia Stock*, in a garden at Woodbridge; an ample space under a noble cedar was all over bloom, and broad rows adorned each side of a walk. In the hothouse at Wisbeach I soon afterwards saw a variety of *Epiphyllum truncatum*, with flowers about two inches long, of a delicate pink, shading into white; the rare *Rhisalis grandiflorus* was spangled with cream-coloured blossoms; and the elegant pink pendant flowers of the *Dielytra spectabilis*, resembling a lady's reticule in shape, and seen by me for the first time, were greeted as an important acquisition. The *Justicia carnea* was rearing its pink bushy head, and the drooping branches of the *Acacia pubescens*, with their yellow flowers and elegant leaves, formed a striking contrast both of colour and foliage to the various beauties around them. In the greenhouse of another gentleman there is a lofty *Edwardsia* in full bloom—its boat-like yellow flowers shaded with orange—had a grand and singular effect at the end of its almost leafless branches, and contrasted well with its neighbour, the *Clianthus puniceus;* their flowers, though differing in colour, bearing some resemblance in shape. The *Aloe horrida* was handsomely blooming with scarlet flowers; the stem about four feet high; and the *Aloe ferox*, whose blossoms are yellow, was in full bud; and I was glad to see these plants are not entirely expelled from greenhouses. From thence I had the great delight of visiting for the first time the gardens at Kew. Memory and time would fail me in even attempting any enumeration of the objects which interested me there; the New Holland House was rich indeed with floral specimens of Dryandras, Banksias, Acacias, &c., and the curious way in which a species of Achrostichum alcicorne, or Elk's-horn Fern, is grown, apparently only stuck upon an upright piece of wood, excited my curiosity to know where its roots were, and whence their nourishment was derived. How wonderful is the Palm House, with its Screw Pine, Caffre Bread, &c.! The front of Westerfield House is adorned by a double yellow Banksian Rose, and, being covered in the spring with primrose-looking flowers, is an object of uncommon interest; the tree is about twenty-five feet high, and of corresponding breadth, and is an unusually luxuriant specimen. In the summer I was gratified by having three varieties of hardy *Yuccas* in flower at the same time, viz., the *ternuifolia*, *glaucescens*, and *filamentosa*, and regret this curious tribe of plants is not more cultivated. A creeper, new to me, graced my greenhouse, viz., the *Scypanthus elegans*, or *Loava elegans*, with its numerous yellow goblet-shaped flowers. Late in the autumn, after admiring the superb collections of cut Roses and Hollyhocks in the Crystal Palace, I was surprised to see the interior boundary of a churchyard in the Isle of Wight entirely formed of what appeared to me to be the Spanish Broom, which, being fully in flower, formed a remarkable looking hedge; and the little church of St. Lawrence had close to its walls a complete edging of pink Valerian. On the bold chalky cliffs leading from Fresh-water Gate to Alum Bay, I detected the exquisite little blue flowers of the *Gentiana acaulis*, as I supposed it to be by the leaves, as well as miniature flowers, but, except in size, resembling our garden specimens; and walking on the Cliff, on the Blackgang Chine side of Freshwater, to inspect a stone memorial marking the spot near which a young gentleman was found, at the edge of the sea, lifeless, having, it was supposed, fallen down the lofty rocks, and not being missed by the numerous party of which he had formed one till their return to Lymington. I saw close to this affecting monument a quantity of turf had been pared off, and a blue carpet had supplied the place of the grass, formed of a very dwarf pale blue *Campanula*. The hedge-sides were often cheered by the pink *Erythræa;* but I was disappointed not to find more Ferns in the picturesque island.—A dilapidated cottage at Bonchurch had a beautiful *Myrtle* growing into its ruined thatch, in full flower; and on the other side of the road a window was enriched with the scarlet blossoms of the *Rochea falcata*. At Southampton, my attention was attracted by the lovely yellow flowers of the *Euknidium Bartonioides*, in the window of a nurseryman; it was in a pot, and blooming so late in the year seemed likely to prove an acquisition. In the shady bowers of Milton Abbey, in Dorsetshire, a fine plant of a very bright and new scarlet *Lobelia* suddenly greeted our eyes. The village of Milton is planned with much taste; small white houses stand on each side of a gently-sloping road, each intersected by a Horse Chesnut; and when these noble trees are in flower the effect must be beautiful, though my utilitarian notions led me to regret they were not *Walnut-trees*. Again I visited Kew, but much prefer the wonders presented there in spring to the effect in autumn; houses I had so much delighted in were without plants, but the Cactus-house was full of wonders, and also the Museum. A *Statice* in a pot, and the brilliant flowers of the *Tritoma uvaria*, were much admired; the latter should be more grown, if hardy in our climate. [It is.—Editor.] I added to my own collection the very pretty pink *Polygonum vaccinifolium;* it was in full flower out of doors till the unexpectedly severe weather entirely and suddenly destroyed the beauty of the gardens. I have been watching the powers of endurance of cold, without protection, of a purple *Diosma*, an *Acacia armata*, now promising abundant blossoms, *Veronica speciosa*, and *Cereus flagelliformis*. The *Diosma* flowered much earlier last spring than its rooted cutting did in the greenhouse, and the *Cereus*, having survived last winter, flowered on its rock-work bed, in an eastern aspect, to my great surprise, in the summer. Whilst I am writing, although the Snowdrops are sparingly visible, the *Rhododendron Dauricum*, *Chimonanthus fragrans*, *Jasminum nudiflorum*, *Tritoma media*, and *Garrya elliptica*, are beautiful objects in my garden, and greatly enrich the bouquets for the house.

SIKKAM HIMALAYAN RHODODENDRONS.

Dr. Hooker's publication on the Rhododendrons of Sikkim Himalaya is now completed in "three parts." There are particular descriptions given of forty-three species, and the work being of folio size, corresponding sized coloured figures of thirty-one species are given. The whole species are arranged as follows. We give an extract of each, so that our readers obtaining any of these fine and interesting species may ascertain whether they be correct, as well as to assist in making a selection.

I. Calyx obsolete; corolla campanulate (bell-shaped), hemispherical at the base; stamens eighteen to twenty (rarely ten); ovary (seed-vessel) ten to twenty-celled; trees with ample leaves, and capitate (headed), often crowded, flowers.

R. Falconeri (Plate 10).—Tree, thirty feet high; flowers white, ten-lobed, divisions at the outer edge of the flower in close heads.

R. Hodgsoni (Plate 15).—Bush, twelve to twenty feet high; large leaves, silvery beneath; flowers pale rosy-lilac, eight to ten-lobed, and in close heads.

R. ARGENTEUM (Plate 9).—Tree, thirty feet high; leaves large; flowers a pure white, in large heads.

II. Calyx cupular, hemispherical, or scutelliform, obsoletely lobed; corolla campanulate, five-lobed; stamens, ten to sixteen; ovary, six to sixteen-celled. Large flowering shrubs, with very *glabrous* leaves.

R. AUCKLANDII (Plate 11).—Noble species, four to eight feet high; leaves large; flowers white, veiny, tinged with pink, broad and shallow. (Synonym, R. Griffithii.)

R. THOMSONI (Plate 12).—Bush, eight to fifteen feet high; leaves broad, flat; flowers campanulate, and of a deep brilliant blood-red colour. Magnificent species.

R. CANDELABRUM (Plate 29).—Bush; flowers sulphur-coloured, edged with rose. A variety.

III. Calyx subfoliaceous, five-parted; corolla funnel or bell-shaped, tube long; stamens, ten to eighteen; ovary, five to six-celled. Shrubs, frequently epiphytes (growing upon other trees, &c.), leaves lepidote beneath.

R. DALHOUSIÆ (Plates 1 and 2).—Finest of the race. It is an epiphytal shrub, six to eight feet high. Leaves medium size; flowers very large, having a lily-like fragrance; white, changing to a delicate rose tinge.

R. EDGWORTHII (Plate 21).—Fine shrub, medium size, often pendulous from trees or rocks. Leaves large; flowers large, white, two or three together.

R. BARBATUM (Plate 3).—Tree, forty to sixty feet high. Flowers rose-coloured, in compact heads. R. LANCIFOLIUM (Plate 4) is a variety of Plate 3.

R. CILIATUM (Plate 24).—Shrub, two feet high, hairy. Leaves large; flowers purplish, in small clusters.

R. GLAUCUM (Plate 17).—Handsome shrub, two feet high. Leaves small; flowers a bright rosy-pink, in large clusters.

R. PUMILUM (Plate 14).—Smallest of these Rhododendrons; very neat. Roots among moss, growing three to four *inches* high. Flowers on long stalks, rich pink.

IV. Calyx small, or obsolete, rarely five-toothed; corolla bell-shaped, or with the limb (end) contracted below its base, and half-funnel shaped; stamens, ten; ovary, five to ten-celled. Shrubs.

R. CAMPBELLIÆ (Plate 6).—Fine tree. Leaves narrow; flowers rosy-scarlet, in close round heads. (Synonym, R. nilagiricum).

R. WALLICHII (Plate 5).—Shrub, eight to ten feet high. Leaves broad, elliptic; flowers a lilac-rose.

R. ÆRUGINOSUM (Plate 22).—Shrub, four feet high. Leaves blunt; flowers lilac, in large heads.

R. WIGHTII (Plate 27).—Handsome shrub, ten feet high. Leaves large, flat; flowers pale yellow, spotted with red, in large heads.

R. LANATUM (Plate 16).—Shrub, the young wood covered with a white cottony appearance. Flowers sulphur, spotted with red.

R. FULGENS (Plate 25).—Shrub, four feet high. Leaves broad, woolly beneath, purplish; flowers rich blood-red, in close round heads.

R. CAMPYLOCARPUM.—Bushy, six feet high. Leaves short, broad; flowers pure sulphur, without spots, in large heads. Charming species.

V. Calyx short, leathery, five-lobed; corolla funnel-shaped, tube narrowed; stamens, ten to twenty: ovary, five to ten-celled. Shrubs, with leaves lepidote beneath.

R. MADDENI (Plate 18).—Fine shrub, six to eight feet high. Leaves sharp-pointed, bright rusty beneath; flowers white, long funnel-shaped, in heads of three or four together.

R. CINNABARINUM (Plate 8).—Small elegant shrub, with small pendulous cinnabar-coloured flowers.

R. ROYLEI (Plate 7).—Small shrub. Leaves oval; flowers a rosy-copper tinge, tipped with blue in the bud.

VI. Calyx subfoliaceous, five-parted; tube short, tinged at the base; lobes patent, hollow; stamens, five to ten; style subclavate; ovary, five-celled. Shrubs, often small; epiphytes or terrestrial, with leaves densely lepidote (except R. pendulum).

R. CAMELLIÆFLORUM (Plate 28).—Small slender shrub, pendulous from trees or rocks. Leaves brown beneath; flowers white, two or three together, resembling a single Camellia.

R. PENDULUM (Plate 13).—Small pendulous epiphyte. Flowers white, two or three together.

R. SALIGNUM (Plate 23).—Pretty shrub, two to four feet high. Leaves narrow; flowers yellow, spreading, and shallow.

R. ELEAGNOIDES (Plate 23B).—A pretty diminutive plant, growing in clumps, like heather. Leaves small; flowers varying from yellow to purple, broad and shallow, almost like a Cistus.

VII. Calyx five-parted; lobes short, rounded; tube short, funnel-shaped; divisions of the limb narow-pointed, spreading entire; stamens, eight; style slender; ovary, five-celled. Azalea-like flowers.

R. VIRGATUM (Plate 26).—Small shrub, glabrous, four feet high. Flowers small, purplish-red.

R. TRIFLORUM (Plate 19).—Shrub, four to six feet high. Flowers greenish-yellow, in three's together. A variety of the last.

R. NIVALE (Plate 26B).—Small depressed shrub, spreading half-a-yard or more. Leaves small; flowers rose-coloured. It is very fragrant, resembling the Eau de Cologne.

R. SETOSUM (Plate 20).—Elegant plant, nearly a foot high. Leaves leathery; flowers borne in profusion, a lively rosy-purple colour. It is much like Rhodora in appearance, but has brighter flowers, and leaves Box-like. It diffuses a strong aroma for some distance around.

CULTURE OF THE GLADIOLUS CARDINALIS AND ITS VARIETIES.

BY JAMES SMITH, GARDENER, OF LEAMINGTON PRIORS.

IT has been with much pleasure that I have noticed the great improvement which has been effected in this lovely race of plants, by a considerable number of most beautiful hybrids which have been raised both on the Continent, and more especially in our own country, by Mr. Plant, of Cheadle, and Mr. Cole, of Birmingham. From these sources I have procured all the varieties they have sent out, as well as a number of the continental ones.

This tribe of flowers has long been a pet of mine, and the long term of my practical experience enables me to give particulars of a mode of culture the results of which I have not seen equalled elsewhere.

The bed is an oblong square, which forms the boundary of one side of a flower-garden four feet six inches wide and fifty-one feet long. I plant in it five rows, which comprises 375 plants. The soil was thrown out to the depth of eighteen inches; four inches of broken bricks was spread over the bottom, upon which a layer of chopped turf was laid, and then filled up with the following compost, which had been prepared a few months previous in the compost yard. Equal parts of good fresh loam, sandy peat, old rotten cow-dung, and well-rotted leaf-mould, the surface of the bed being a few inches higher than the general ground. About the middle of October I planted the bulbs four inches deep, pressing the soil around each. Having descriptions of the heights the respective kinds usually grow, I arranged them so as the centre row contains the tallest, and the lowest ones in the outer rows. At the approach of severe weather, I have a wooden frame-work, four inches thick, around the bed, and the frame at the north side is a few inches higher than the front. On this frame-work, in severe frost or heavy continuous rain, I have some glass lights placed over, which, being four feet six inches long, the water at the front drops into a small half-circular sunken sheet-iron spout, which conveys it to the drain grate, and the bed is preserved from excess of wet; when the weather is mild, the glass is removed. Of course, this kind of protection is only casual, and only adopted under severe circumstances, to keep the frost from injuring the tender foliage which has pushed under ground, or when it has pushed above ground. Where there is not the provision of spare glass lights, other temporary covering can readily and cheaply be provided. The tender leaves must be saved from injury by frost, or the bloom will be weakened, and the embryo spike probably damaged. When the weather, in spring or summer, is dry, I give occasional waterings, twice of soft pond-water to once of liquid manure; a tank of the latter is in the farm-yard, and at all times ready for such purposes. The liquid manure is not poured upon the bulb or foliage at any time, but between the plants; but the water is applied sufficiently each time to moisten the entire soil. This watering is only occasionally necessary. but contributes much to a *vigorous* growth, and the more vigorous will be the bloom, and the *finer* the bulbs become, and thus a longer spike of flowers will be obtained, in proportion to the size of the bulb, the following year. The flower stems are duly secured to a stick. When the bloom is over, and the leaves become yellow, the bulbs are taken up, and all offsets separated, &c., and the bed is filled by plants in pots provided for such necessities, and which are removed in October, for the replanting of the Gladioluses.

By the mode of treatment I pursue my plants and flowers are half as large again as any I ever saw, either in gardens or at exhibitions, and most amply repay for the little attention.

THE NERIUM OLEANDER.

BY CAPTAIN DOUGLAS.

In your Magazine I find some inquiries about the cultivation of this handsome race of flowering plants. In the early part of my manhood I travelled thousands of miles in the countries where this fine-blooming shrub (N. oleander) grew naturally and flowered magnificently. Twenty years ago I returned to England, where I have remained at a paternal home in Devonshire. My admiration of this plant in its native climes endeared it to me in my own country, and the culture of *flowers* being my *hobby*, I have obtained, and now grow, the species, and twenty-three of its varieties, and with much success. I have followed (as far as artificial means admit) a treatment to correspond with that in which I have seen immense thousands of it flourish luxuriantly.

In their native countries the plants have a *long dry season of rest*, and a *short wet season of rapid growth*, terminating with a splendid display of lovely flowers. These variations I have endeavoured to supply. Having a hothouse for plants, a greenhouse, and pit frames, all heated by hot-water pipes, &c., I possess facilities for the purpose.

When the plant has done flowering, I cut back the shoots, so as to leave only two buds on each, and place them in the stove, where, after carefully watering (not too much), young shoots soon push, and when they are an inch or so long one only is left (the other rubbed off) on each part of the old shoot, and the plant is then repotted, reducing the ball carefully at the side, so as to loosen the fibrous roots, in a compost of equal parts of peat, strong loam, and well-rotted cow-dung, with a sprinkling of *bits* of charcoal. A liberal drainage of two inches of broken pot, so that the water may not stand in a saucer so *high* as the *soil*, but only to the depth of the broken materials; for although the plant flourishes with an abundance of water at the roots during their blooming season, given in a saucer in which the pot stands, yet when so supplied to plants in pots, if the soil be constantly soddened, it soon causes it to become sour; but the roots will push amongst the broken pot, and fresh water being given, the beneficial effects of that element is derived by the plant, and the soil is not soured. After being potted, it is kept in the stove, plunged in a tan-bed, or placed in a hot-bed frame where the pot can be plunged; the growth of the new wood is promoted, and if the roots become abundant, a repotting is necessary; but I do not repot after the end of July, because it would keep the plant growing too long, to the prevention of the wood becoming consolidated and duly ripened during summer. When the new shoots are about six or eight inches long, the plant is removed to a warm, sunny, but airy situation, out of doors, where it remains till the approach of cold weather, when it is taken into a cool greenhouse. No water is given whilst here till the first week in February: it then has a good soaking, and in a week or ten days is taken into the stove, and it soon pushes forth its head of bloom, and is highly ornamental during April and May.

Where there is not the advantage of a stove to promote the rapid growth and maturity of its new wood, a hot-bed frame, deep enough, or pit frame where there is bottom heat, will be equally available. The great object to be attained is to get the new wood vigorous and well ripened by the end of autumn, the embryo heads of blossoms being *then* formed at the end of each shoot; this being effected, the plant will bloom satisfactorily each season in the greenhouse. If there be a greenhouse *only*, and no other facility to push on its early growth, then have a double number of plants, so that one-half may bloom one year and the other the succeeding, when the plants would have one year to provide blooming wood, and then bloom the following. This can be certainly accomplished by cutting in the plant that blooms in 1852 in March 1853, letting it push shoots, then repotting it, and cutting away where too many. Grow it in the greenhouse till August, and place it out of doors, &c., to consolidate and ripen; such prepared plants will always bloom the following year in the greenhouse. Manure water should occasionally be given during the time of growth, to promote the vigour as much as possible.

MISCELLANEOUS SECTION.

Remarks on the Epacris.—This is one of the loveliest tribe of greenhouse plants, and especially valuable, as they can be grown so as to have a fine display of bloom during the entire winter and spring months. In fact, by a course of proper treatment, some may be had in beauty through the entire year. The plants, having due attention in potting, watering, air, &c., grow freely and bloom most profusely. Where a collection is desired, the party ought to repair to the nursery establishments, and almost every species and variety may be obtained at a cheap price. In procuring plants, select BUSHY ones of a small size, but likely to be feathered (as it is said) down to the pot. The plants should be YOUNG, so that by pinching the leads occasionally they soon become bushy, and by such stopping are easily kept in that condition in future. They flourish best in a turfy, sandy peat, which has been obtained for a year or so, broken into small pieces, not sifted, and amongst it a portion of broken pot, brick, or charcoal. A cold frame, or shallow pit frame, is the best place for the plants during summer; they receive a due portion of air, and dry winds do not operate upon the roots. Shade from mid-day sun in hot weather is essential. Take care that worms are prevented entering the pots. A thick bed of coal-ashes makes a good bed to stand upon. The plants must be duly watered, care being taken not to *overdo* them, or they will soon die. In hot weather, let the bed of coal-ashes be well watered just before evening; the evaporation during the night is very beneficial, and the roots are cooled by it. Summer is the season for providing the blooming shoots for the autumn, winter, and spring blooming, and the young wood must be *well ripened* during that period; therefore, from the latter part of August, do not shade the plants; let them have full sun, and let them be kept rather dry, to check their growing and promote the ripening process. Whether the plants are kept in a greenhouse, or cold frame, &c., they must have little water during the winter. But in order to bring some of the earliest blooming into flower in autumn, as well as winter, they must be taken to a warmer part of a greenhouse or other proper place, where, being kept warmer, they soon after begin to blossom. A succession is easily provided. Where there is a stock of plants, cut back and repot, at successive times, from February to May, and afterwards promote the growth and maturity of the wood, taking the ripest plants into a higher temperature first, and follow with others in similar course. No plants are more readily cultivated than the Epacris, if proper attention be paid, and they amply repay for it. Cuttings strike readily in white sand, and a young stock is easily kept up, but, if not, young plants may be bought for a mere trifle. The following are the handsomest, and the selection has been made from all the best collections in and around London. Any person desirous of making additions to their greenhouse may rely on the accuracy of the descriptions.

Epacris mucronata, bell-shaped, snowy white, in heads.

E. coccinea, tube one inch long, rich deep scarlet.

E. albida, tube one inch, bell-shaped, pure white.

E. hyacintheflora, three parts of an inch, bell-shaped, a beautiful rosy-blush; superb.

E. alba-compacta, one inch long, wide tube, pure white; fine.

E. campanulata-rosea, half an inch, bell-shaped, beautiful rose; superb.

E. campanulata-rubra, size and form of last, but of rosy-red colour.

E. limatis, one inch, bright pink, with white tip.

E. sanguinea, one inch, deep blood-red; fine.

E. nivea, half an inch, bell-shaped, white; pretty.

E. variabilis, half an inch, bell-shaped, a beautiful pink.

E. rubra-grandiflora, half an inch, bell-shaped, in bud bright red, pretty pink when open.

E. ternatus, one inch, pretty pink, with white tip.

E. impressa, nearly one inch, a beautiful flesh-colour; neat and pretty.

E. autumnalis, one inch, vivid crimson; showy.

E. microphylla, white, in very long spikes; neat and pretty.

A London Amateur Plant-grower.

HORTICULTURAL SOCIETY, *Feb.* 17.—Mr. Franklin, gardener to Mrs. Lawrence, of Ealing Park, received a Knightian Medal for a nice collection of Orchids, consisting of Zygopetalum rostratum, Oncidium Cavendishii, and the handsome O. unguiculatum, a well-coloured variety of Lycaste Skinneri, and L. tetragona (?), a good example of Ansellia Africana, Cyrtochilum maculatum, and cut flower spikes of the charming Amherstia nobilis. Mr. Wooley, gardener to H. B. Ker, Esq., contributed a well-cultivated Cypripedium insigne, bearing some fifteen or sixteen blossoms; a Certificate of Merit was awarded it. Messrs. Henderson, of Pine-apple Place, sent Araucaria Cookii, even a handsomer species than the Norfolk Island Pine itself; a pretty hybrid Begonia, and Franciscea confertiflora and eximea. The Rev. Mr. Beadon, of Northstonham, furnished a boxful of striped

Camellia flowers, gathered from a south wall, where they had received no artificial protection whatever, in order to show what kind of weather is experienced in Hampshire: the blossoms were exceedingly fine, without speck or blemish. The Hon. W. F. Strangways also sent examples of the mildness of the climate of Dorsetshire, in the shape of an exceedingly interesting collection of cut specimens of flowering shrubs and herbaceous plants, all grown out of doors at Abbotsbury. Among them were Hellebores, purple Rhododendrons, Azara integrifolia, with very pretty tufts of yellow flowers; Fuchsia splendens, finely in blossom; Pulmonias, red and blue; Saxifraga ciliosa, the rare and beautiful Scorpion Iris (I. alata), the pretty Lithospermum rosmarinifolium, which is worth growing, even under glass, on account of its beautiful bright blue blossoms, and several other plants, all finely in flower. It was mentioned, with reference to the Scorpion Iris, that it refused to flower until it was planted within reach of the spray of the sea; although it grew satisfactorily in a more inland situation, yet it would not blossom. Mr. Epps, of Maidstone, sent a small bit of the white-flowered Cereus anguliger, and flowers of the very fragrant Edgworthia chrysantha. W. Everett, Esq., of Chase-side House, Enfield, contributed examples of a mode of glazing without putty. In these the glass was laid flat, in grooves, between strata of cork; thin pieces of cork were then placed between the edges of the glass, the latter being pressed from the bottom upwards with sufficient force to indent its edges into the cork, which is then shaved neatly off, and the whole is secured firmly in its position; this has been proved to be perfectly water-tight and efficient. This plan of glazing was stated to be as suitable for windows as for garden purposes, and in addition to others it has this advantage, the panes can at any time be moved, or, when broken, new ones put in without trouble or inconvenience.

Rot in the Auricula.—There is one fatal malady to which this fine flower is liable—that is the *rot*. This may be attributed to two causes, viz., improper compost, and allowing water to lodge in the hearts of the plants. An experienced cultivator can instantly perceive, by the peculiar smell, when disease is in the collection. When a plant is seen with its head leaning to one side, and the outer leaves assuming a purple hue, having also a strong disagreeable smell, then rot has commenced. Plants so infected must be immediately removed to a distance from those in health, otherwise the whole collection may be swept off in a very short time. I tried every sort of experiment to cure this scourge. The only remedy that was successful was to take the plant out of the pot, wash it well, and with a sharp knife cut away all infected parts, and dust the wounds with charcoal; and after allowing the plant to dry for a few hours, repot it in a mixture of leaf-mould, loam, and sharp sand.

To guard effectually against the rot, never allow the plants to have any heavy rains; and purchasers cannot be too careful in having their plants from a healthy stock. I lately saw large collections in such a state that I would not have taken the whole in a compliment, knowing that I should only be introducing the plague into my own stock.—*G. Lightbody, Scottish Gardener.*

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

We refer our readers to the last month's Calendar for many things which require attention now, which we avoid repeating. Finish pruning Roses. Many kinds of shrubs may be increased by layering, similar to Carnations. Perennial herbaceous plants increase by division. Hardy annuals, to bloom early, may be sown. Bedding plants must be provided by sowing, striking cuttings, repotting last autumn-struck cuttings, &c. Sow Stocks, Asters, &c., in pots or beds.

Florists' Flowers.—*Auriculas* and *Polyanthuses:* admit air on all favourable occasions. Manure water should be given once a-week. Sheep's-dung, put into a tub, and soft water poured upon it, in quantity so as to form a strong liquid, is very serviceable. The dung must be collected for a few weeks before using. Old cow-dung will also answer the same purpose. Sow seeds of above. If too many blossoms show, thin them directly.

Anemones and *Ranunculuses* must be finished planting immediately. If no bed has been prepared for them, it may be made by taking out the soil to the depth of fifteen or eighteen inches, and replacing it at the bottom with a layer three or four inches thick of cow-dung, and filling up with soil composed of *decayed* turfs taken from a loamy pasture. Such as were planted in the autumn will now be making their appearance above ground. It is very necessary to keep the soil closed firmly round the crown of the plant; when this is neglected the bloom suffers. *Tulips* require continued attention, as directed last month. Any that happen to be affected with canker will appear sickly; the roots should be examined, and the damaged part cut clean out. If left exposed to sun and air, the parts will soon dry and heal. Avoid *frosty air* getting to the wound by exposure. If by any casualty the plants are frozen, then, early in the morning, sprinkle the tops over with cold water, and keep them covered over for an hour or so before they be exposed, as the sun must not be allowed to shine upon them until the frost is all out. *Carnations* and *Picotees* may, at the end of the month, receive their final shifting. The pots known as No. 12's are the size usually employed. In potting, place at the bottom two inches deep of crocks, to give free drainage. Use a compost—which is best if it has been previously prepared and become well incorporated together—of these proportions: two barrows full of fresh yellow loam, three of well-rotted horse-dung, and half-a-barrowful of river sand, well mixed: plant in it *without sifting*, by breaking very well with the spade. Place the plants in a sheltered situation out of doors, and let them be carefully looked after. Where frost has disturbed the roots of

Pansies in beds, they should be pressed into their places, and a top-dressing of rich mould given to them, all over the bed. They ***must be*** screened from cutting winds by fir, yew, or whin branches. In forming new beds the situation must be where there is the benefit of free air. Plants in pots, under glass, will require shifting into larger sizes, for as this is the period when they begin to grow, they will soon become weak, and bloom out of character, if confined in small pots. If beds of *Pinks* were not planted in autumn, early in this month they may be. In removing the plants, whether out of pots or open ground, be careful to retain all the ball of roots, and as uninjured as possible. Protect beds from cold easterly winds.

IN THE FORCING STOVE.

Sow seeds of any tender and half-hardy annuals that have been omitted. Sow liberally of *Cinerarias* and *Chinese Primroses*, for if the plants be properly attended to, they will produce a fine bloom for autumn. In watering tender annuals, &c., it must not be over the tops, or many of the sorts will be rotted by it. The best method is to flood over the surface of each pot, always using tepid water. Annuals sown in frames—*Cockscombs*, *Balsams*, *Thunbergias*, &c.—if large enough to pot, should be in 60-sized pots.

Sow seeds of *Dahlias*, *Fuchsias*, &c. Seeds of most greenhouse plants will do well if sown now. Repot and forward *Amaryllises*, *Gesnerias*, &c., as directed last month. *Ipomeas*, *Echites*, and similar plants, may be trimmed in, disrooted when necessary, and brought here te excite early growth.

IN THE GREENHOUSE, &c.

Continue to admit all air possible. Repot the various inmates, as required, from time to time, and examine to see that the drainage is free. Supply *Cinerarias* with manure water occasionally. Save them from green fly; smoke or tobacco water must be applied at the first attack. Pot off seedlings, &c., for successive bloom. Immediately stop the shoots of *Pelargoniums* which are to bloom from June, in order to induce new lateral ones. Let Pelargoniums have plenty of air, but close up early in the afternoon. Syringe overhead twice a-week after shutting up. In watering, give enough to moisten the entire soil.

Cupheas, *Calceolarias*, *Verbenas*, *Petunias*, *Fuchsias*, and other young stock, must, as growth advances, have the shoots stopped, which will cause them to be bushy, forming cuttings of the young shoots.

Camellias exhausted with flowering should now receive a little extra attention; remove them to a cooler situation for three weeks, on the principle of slow breaking, and give the root a chance of overtaking, in some degree, the expenditure which has taken place in the system. Any pruning necessary perform at this time; no plant can succeed better, after judicious pruning, than the Camellia.

See that *Lilium speciosum*, &c., are not saturated by watering.

BRIEF REMARKS.

SELECT INDIAN AZALEAS.—Junius wants to add to his collection a few of the best, and such as have flowers very distinct, and of good shape. (The following will do):—

Azalea indica alba-magnifica. This is an admirable pure white variety, of exquisite form, and the petals of thick substance.

A. alba-lutescens, pure white, spotted with red, and tinged with yellow; very pretty.

A. alba-striata, white, striped with pink; very pretty.

A. triumphans superba, large, and of a rich damson colour.

A. splendens, orange-pink, very showy.

A. refulgens, rich deep scarlet, large, free bloomer; superb.

A. Knight's Exquisite, violet-pink, with red spots, and white border; pretty.

A. Duke of Wellington, flower large, petals of thick substance, superb form, and a pretty rosy scarlet; very fine.

A. Iveryana, white, striped with red; very fine.

A. Ardens, rich scarlet, fine form.

A. violacea superba, rich purple-violet, fine and showy.

A. variegata, salmon-pink, with a white border; very pretty.

A. sinensis, a deep yellow, which strikingly contrasts with others.

THE HOLLYHOCK.—This noble growing flower is now become *an essential* for every garden, as well as for Floral Exhibitions, and whoever (having a garden) saw the splendid specimens shown at the London Meetings during the past season, must have felt an anxiety to possess a collection. And as they *now* may be procured at a very reasonable price, and being so easy of cultivation, surely the gratification will be indulged in, and we may expect to have a numerous class of exhibitors the coming season. It is necessary that Committees of Floral Societies should provide in their schedules for two classes of exhibitors, as amateur growers and gentlemen's gardeners cannot be expected to have facilities for competing successfully with nurserymen and the florist-dealers. Due encouragement ought to be given to amateurs and gardeners. I am an extensive amateur grower, and by planting a portion in autumn, I have a fine display of flowers as early as July, which continue for some time in fine display, but by planting another portion early in February, these plants come into bloom by the end of August, and continue in full beauty till the end of October. By this simple process I have a lengthened floral season of their magnificent flowers. The plant requires a *rich loam* of *medium* character, not light, neither clayey. Equal parts of good loam (not all to be old spent loam but should be mixed with new), and *well-rotted* dung, on a dry substrata, and a sprinkling of bone and charcoal dust, with a liberal supply of water during summer, will suit them, and in such a compost they will grow very vigorous, and have flowers of a proportionate improved size. The finest varieties are given in the accounts of floral exhibitions, and have usually been given in your Magazine. I can however recommend the following:—Walden Gem, deep crimson; Comet, ruby-red; Golden Queen, yellow; Enchantress, deep rose; Queen of England, bright pink; Eclipse, veined maroon; Lady Harland, white, superb; Magnum Bonum, rich dark crimson; Rosea grandiflora, light rose, superb; Rosea alba, rose and white; Mr. Charles Baron, salmon-pink; Obscura, silvery-puce; Queen, light blush: Sulphurea perfecta; Watford Surprize, white, dark inside; Delicata, French white; Black Prince; General Bem, vivid scarlet; Beauty of Haverhill, silvery lilac, beautifully veined; Aurantia, salmon and orange. The above eighteen are superb in form, many of them very large flowers, and comprise an admirable contrast. Old established plants have usually a crown of young shoots pushed in spring; when such are from one to two inches long, cut clean away all spare ones, insert them in a pot, firmly in a sandy loam, and place them in a frame, where there is a trifling heat, shade them awhile and they soon strike root. If there are no crown shoots to spare, single eyes of the shoots may be similarly potted and they will readily root, these may be got from June to August. Take a shoot cut horizontally close under the bud, and two inches above it, insert them firmly.

PELARGONIUMS BEST SUITED FOR EXHIBITION PURPOSES. (*By Venus.*)—Last year ORION favoured us with a list of the best twelve varieties for this purpose,

being those selected by a number of the most eminent growers and exhibitors. That list is inserted in the February Number, and the names are given in ratio according to their merits, and stand as follows:—

Constance, F.; Magnificent, Fo.; Gulielma, B.; Pearl, D.; Centurion, B.; Forget-me-not, L.; Negress, G.; Alonzo, F.; Star, B.; Emily, B.; Conspicuum, F.; Virgin Queen, A.; Mont Blanc, S.; Orion, F.; Ariel, F.

(F. Foster; Fo. Foquet; B. Beck; D. Drury; L. Lyne; G. Garth; A. Arnold; S. Story.)

The following varieties (it appears by a correspondent of the Florist) are the first eighteen kinds which have been the oftenest in the winning collections at the exhibitions in or around London, the last season, and are arranged according to their frequency, as follows:—

Star, Forget-me-not, Gulielma, Rosamond, Pearl, Centurion, Salamander, Rowena, Constance, Negress, Norah, Maes, Lalla Rookh, Orion, Crusader, Mont Blanc, Prince of Orange, Ajax.

It may be safely concluded, that those in the first list, selected by the eminent exhibitors in the spring of 1851, are *first rate* for exhibiting; and those in the last list, being the most general in the winning collections at the subsequent shows, are also well adapted by form, freedom of bloom, colours, &c., for showing, and persons desirous of *now* procuring specimens for such purposes, may safely make a selection; for whilst the varieties are of excellent form no doubt, they are very distinct in colours and markings, thus producing a desirable and striking contrast. We are not to conclude, however, that there are no others of good properties, some such are yet scarce, not having been pushed forward by the raisers, and others being yet too high priced to be generally possessed.

Coniferæ.—Every year gathers up additional facts relative to the hardiness of many of the new and rare Coniferæ, which have but very recently been introduced. At page 460 we have given an account of several pines which have withstood the severity of our climate for three or four years; and the information which comes to us from various sources shows that much remains yet to be known in regard to locality, soil, exposure, &c., before we can safely pronounce a tree not to be hardy. We have, we believe, before mentioned, that Cedrus deodara, in a soil where the least moisture stands about its roots in winter, often loses the ends of its branches, while in a dry locality it is as hardy as our native hemlock; and we have recently noticed, in our foreign journals, that the Cryptomeria japonica in Scotland, in cold, damp soils, is almost sure to be destroyed, while in a dry one it has come out of the winter unharmed. These facts show that we should not hastily decide upon the hardiness of a tree, but await the trial of experiments in various soils and exposures. We look forward with high expectations of many valuable additions to our hardy trees and shrubs from California. Mr. Prince, of Flushing, has returned after three years' sojourn there, and in a supplementary catalogue which he has forwarded us, we notice no less than forty species, among them two magnificent evergreen oaks, a California Bay or Laurel, with splendid evergreen foliage, an evergreen Photinia, with clusters of snow-white flowers, an arbor vitæ, forming a tree one hundred feet high, Pinus californica, ponderosa insignis, &c. Cupressus mexicana, Juniperus mexicana, and others. These will all undoubtedly prove hardy, especially in the middle states, and will be most important additions to our already increasing variety of trees and shrubs. It only remains now for our nurserymen to take hold with energy, and propagate a good stock of all the finer species and varieties, and test the hardiness of those of which there are doubts, that gentlemen may know which to buy and which to reject. Some information of this may be obtained by knowing the native habitat, and the country from whence they were introduced. But there is no such satisfactory way of ascertaining the requisite information as by actual trial.—*Hovey's Magazine.*

Blinds for Glass Houses.—The plan I have adopted for the last three years for covering my greenhouses, conservatories, forcing-pits, and cold-pits, during winter, is this:—I have had a canvas covering made the size of the roof, which is dressed over with a composition of boiled oil and litharge (one covering was dressed with boiled oil, litharge, and yellow ochre); but the first composition is the best, I find, because it is more transparent; this is nailed on to the rafters, as close as possible to the upper part of the roof; the other end of the canvas is nailed on to a roller, which rests on the lower ends of the rafters, and is kept in its proper place by two hooked irons fixed to the rafters. At one end of the roller is a wheel fixed, the outside diameter about fourteen inches, with a groove for the cord to run in, about one inch and a half wide and the same in depth; there is an iron pulley fixed in the wall above the roof, exactly in a straight line with the wheel, and about six inches above the roof; the cord is fixed into the groove of the wheel by a nail, just slipped through the pulley on the top; and thus the roller, with the covering attached, is drawn up and down with the greatest ease. To prevent the wind from lifting it up, I have two or three brass knobs fastened into the sides of the roof, about four feet apart, and a corresponding strip of leather sewed on to the covering, with a button-hole to each. Supposing the roof to be too high to reach from the ground, to button these strips, you have merely to use a short ladder. I have found these coverings to answer admirably, and without any trouble. If you wish to remove them in the spring, you have only to draw out the nails which attack the covering to the rafters. I ought to have said, that when the covering is let down, the roller, as a matter of course, rests on the irons at the bottom of the roof. I use the same sort of rollers and the thinnest calico for shading the conservatories, &c., in summer.—*J. W.*, *Gardener's Chronicle*. [We have used such coverings too, and found them very valuable.—EDITOR.]

GLASS WALLS.—In our Number for January we noticed these structures. Since that time we have received many letters relative to them. Questions proposed, defects supposed, and praises bestowed. Our answer to all at present is, Mr. Ewens, the inventor, is proceeding in a right direction, and merits the thanks of all horticulturists for what he has done, besides deserving the best means of encouragement by the liberal support of all interested in cultivating fruits and flowers.

The advantages, and value of their application, can only be ascertained but by *practical evidence*, this can only be realised during an appropriate period. Walled-in gardens may have glass walls erected in them without being liable to the casualties of damage to which outer walls would be exposed to. Their adaptation to the successful growth of fruit is excellent. Difficulties have been named by some, relative to some supposed inconvenience in admitting a due proportion of air, not proper access to the trees, &c. Not one such objection is worth entertaining a moment, all that is required in either of the things above named, and any other *necessary* to grow fruits equal, if not even superior, to what they have been grown under any other circumstances, can be realised inside glass walls.

LUCULIA GRATISSIMA. (*J. Simpson.*)—As soon as the plants have ceased blooming, remove them into a shed where they can just be kept from *frost* and *damp*. Withhold water, nearly wholly, for about three weeks. Then cut in the shoots so as to leave two buds on each, and so as to have a nice shaped head for next season. After pruning place each plant where it can have about 60° of warmth, and when the buds break re-pot it, and raise the temperature to 65°. A *moist* temperature is best, and the plant delights in *shade*; *full sun* and *dry wind*, are destructive to it at *any time*, avoid these. When the new wood has pushed from six to nine inches, stop them by pinching away the leads. This throws strength into them, and by July the plants may be removed into a greenhouse, or other sheltered place out of doors, in order to get the new hardened and perfected properly. By the beginning of September place one plant into the forcing-house, it will soon push bloom; and once a month after introduce others, so that you will have a succession for several months. The plants become habituated to bloom at the same period in successive seasons. If you therefore have them duly treated each season, they will answer every expectation. We have seen the Luculia in bloom from the beginning of September to the end of March.

COTONEASTERS TRAINED AS STANDARDS.—In your Magazine for last December you inserted a list of beautiful winter berry-bearing shrubs and trees for windows, flower-gardens near dwellings, &c. Cotoneasters were included. I have some *trees* of them on my lawn, which are from three to four yards high. They are single stemmed, about a yard high, and branches, pyramid-formed, to the very top. The branches fall very gracefully down to the grass, covered with white flowers in summer, and loaded with rich red berries throughout winter and spring. They are easily trained to Standards, and grow rapidly. The kinds I have are Cotoneaster microphylla, gracilis, affinis, and frigida.

I have two plants in a shrub border, with stems three yards high, and a large uniform spreading head. They have a pretty effect, growing behind some dwarfer evergreen in front, and a row of spruce firs behind; the rich coloured berries appear beautiful.—*R. N. Somerset.*

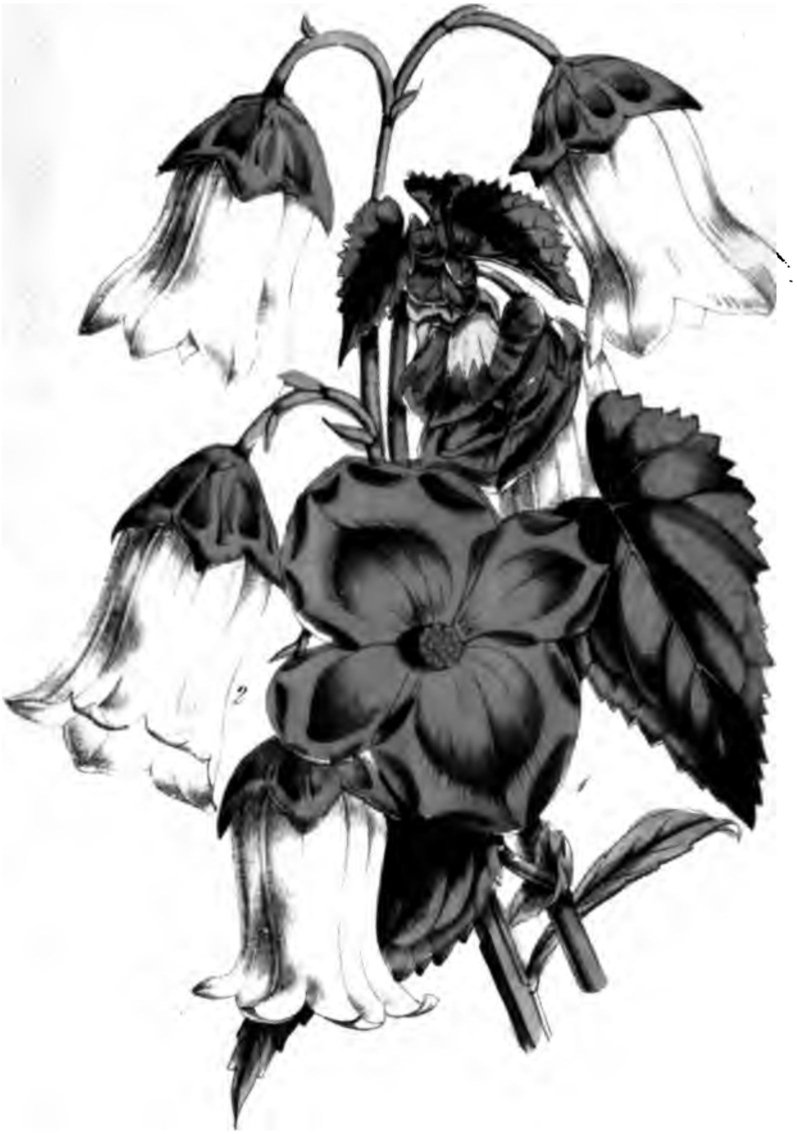
Hyacinths. (*E. H. S.*)—I should feel obliged by your opinion on the following subject in your next Number.

I have a lot of Hyacinths in pots, and many of them are throwing up offshoots. Ought I to remove them by cutting them off, or will they weaken the one bloom if allowed to remain. [The *number* of its blossoms is determined, and will expand (barring accident), but the larger development of the petals can be promoted by the greater supply of nutriment. If you retain the offsets, you expend upon them what otherwise employed would contribute to the increased size of the blossoms.]

Preserving Dahlia Roots. (*A Subscriber.*)—After the frost cut off the foliage and flowers, I immediately cut the tops off to about four inches from the ground, and *raised* the roots a little with a fork to prevent them pushing shoots, and put a little soil over the roots. About a week afterwards I dug them up, placing them in the sun, taking them in. Two or three days after the weather became frosty and foggy, they were then put into a tub, covered with straw, and so remained; in a few days the weather becoming mild, I placed them in the sun as before; decay now appeared, and as they did not improve after a time they were put into a box in the kitchen, and now (January 2nd) all are dead.

I shall be glad to know where I have erred. Likewise give me the names of eighteen varieties of self-coloured and edged Dahlias that are good and constant. Also twelve of the fancy class. [Plant your Dahlias *early* in order to have the *main stem well ripened* at the *early part of autumn*. When frost is expected let the main stem be protected, with a cone of dry chaff, dry ashes, dust, chopped straw, or dry leaves, eight or more inches high, covering it with a *sprinkling* of soil to prevent it being blown away. This preserves the crown of the root from injury by frost. When soil only is heaped up around the stem, it often becomes wet, and a strong frost occurring, it tends to the main stem and crown of the root being damaged fatally, though it may not be fully apparent for some weeks after; the more *unripe* the main stem is, the greater its liability to be injured. As soon as the tops are destroyed by frost, cut them down, so that the main stem (with some of its side ones shortened) is left half a yard, or more, long from the crown of the root. Have the roots taken up at once, and if a small portion of soil adheres to them, let it remain. Remove the roots into a plant-house or pit, where there is a gentle heat, place the roots apart from each other, and get the *stems dry* as soon as can properly be done. In two or three weeks the tops may be cut off to about two or three inches from the crown. With such treatment we have not lost more than one out of an hundred roots during many successive years. We repeat plant early, get the *main* stem *well hardened*, preserve it from being operated upon by frost, and allow a long stem to remain at the first cutting of the tops, that there may be means for evaporation, and dry the stem in a plant structure where there is a gentle heat. Afterwards keep from frost and damp, and not a root will perish. List of names in our next.]

Tropæolum Lobbianum.—This beautiful Tropæolum is worthy of a place in every collection where plants are required for winter flowering. Out of all our collection of creepers, this is by far the most showy at this season of the year. I have ten fine specimen plants of it, which have been a complete mass of flowers ever since the middle of October last. As it does not produce seeds freely, it is advisable to propagate it by cuttings, which should be selected in June or early in July. I always place single cuttings in small pots filled with sand, and plunge them in a little bottom heat. As soon as they are well rooted, I pot them into 6-inch pots, and place them in the greenhouse. With proper treatment, they will be ready to receive their final shift into 12-inch pots about the end of August, using soil composed of equal portions of sandy loam and peat, with thoroughly-decomposed horse-manure and a quantity of good sharp sand, to keep the compost porous. After this final shift, I place a wire trellis to each plant, firmly securing it to the pot. They are then placed in the stove, and, as soon as the plants commence rapid growth, every shoot is carefully trained, so as to cover the trellis regularly over. By the end of September this is complete, and the plants will be showing hundreds of bright orange flowers. As soon as the blossoms fully expand, the plants may be removed to the conservatory or greenhouse, where they will continue to produce a succession of flowers for a long time.—*S. T., Lichfield.—Gardeners' Chronicle.*



1. Begonia Martiana
2. Campanula Vidalii.

APRIL, 1852.

ILLUSTRATIONS.

1. BEGONIA MARTIANA.
2. CAMPANULA VIDALLII.

"Now hazel catkins, and the bursting buds
Of the fresh willow, whispered SPRING is coming;
And bullfinches forth flitting from the woods,
With their rich silver voices; and the humming
Of a new-waked bee that passed; and broods
Of ever-dancing gnats again consuming,
In pleasant sunlight, their re-given time;
And the germs swelling in the red shoots of the lime.

"All these were tell-tales of far brighter hours
That had been, and again were on their way;
The breaking forth of green things and of flowers
From earth's breast; from bank and quickening spray,
Dews, buds, and blossoms, and in woodland bowers,
Fragrant and fresh, full many a sweet bird's lay,
Sending abroad from the exultant spring,
To every living heart a gladsome welcoming."

"Not worlds on worlds in phalanx deep
Need we to prove a God is here;
The DAISY, too, fresh from winter's sleep,
Tells of His hand in lines as clear.

"For who but He who arch'd the skies,
And pours the day-spring's living flood,
Wondrous alike in all He tries,
Could rear the DAISY's rosy bud?

"Mould its green cup, its wiry stem;
Its fringed border nicely spin,
And cut the gold-embossed gem
That, set in silver, gleams within?

"And fling it, unrestrain'd and free,
O'er hill, and dale, and desert sod,
That man, where'er he walks, may see
In every step, the stamp of God."

1. BEGONIA MARTIANA.

The entire tribe of Begonias is a very interesting one. Most of them are very free bloomers, and some of them have immense branching panicles of semi-transparent flowers. They bloom generally in winter and spring, and require to be cultivated in the stove, where they display their lovely delicate flowers, producing a charming appearance, more particularly so at the seasons when flowers are especially valuable. The species we have figured does not require the temperature of a hothouse, but flourishes and blooms freely when grown in the GREENHOUSE, OF PIT-FRAME, where it forms a charming ornament; and by potting, and starting plants in the hot-bed at successive times, it may be had in bloom all the year. It is a *tuberous*-rooted perennial, the top dying down after having done blooming: water must then be gradually lessened, to allow the roots to have a season of rest. It grows about two to two-and-a-half feet high, forming a neat plant, and is easy of cultivation. The blossoms are often larger than those from which our figure is taken, and are delicately handsome. It succeeds admirably, too, in a dwelling-room window, where, as well as in every greenhouse, it merits a place.

2. CAMPANULA VIDALLII.

This charming graceful flowering plant was discovered at Flores, one of the Azorean Islands, and seeds were sent to England in 1850. We first saw the plant in bloom in the establishment of Messrs. Osborn and Sons, of Fulham. It is a "*half-shrubby*" plant, which produces several branches, each of which rises about two feet high, terminating in a panicled-spike of fine drooping flowers, which are very ornamental. Its graceful habit and free-blooming character render it a very valuable plant for the flower-garden. It succeeds well, too, when grown in pots, and is ornamental for the greenhouse in summer. It is easy of cultivation, raised readily from seed, and thus a stock of young plants may be raised every year. It requires a little protection during winter, from the severest weather. It ought to be grown in every garden, contrasting beautifully with the rich colours of other flowers.

NOTES ON NEW OR RARE PLANTS.

ARAUCARIA COLUMNARIS. THE PILLARED.—(Synonymes, Dombeya columnaris; Araucaria Cookii.)—A native of New Caledonia, where Mr. Moore, of the Botanic Garden, Sydney, recently discovered it, and has introduced it into England. There is a superb figure of it in the Botanical Magazine, Fig. 4635, and the following remarks are recorded relative to this fine species. "To Captain Cook, the great circumnavigator, in his second voyage, however, is due the first discovery of this Araucaria, in the little islands of New Caledonia. On one of the western small isles was an elevation like a tower; and ovér a low neck of land, within the isle, were seen many other elevations, resembling the masts of a fleet of ships." And again, "a few days after, as we drew near Cape Coronation, we saw in a valley to the south of it a vast number of those elevated objects before mentioned; and some low land under the foreland was covered with them. We could not agree in our opinions of what they were. I supposed them to be a singular sort of trees, being too numerous to resemble anything else; and a great deal of smoke kept rising all the day from amongst those near the Cape. Our philosophers were of opinion that this was the smoke of some internal and perpetual fire. My representing to them that there was no smoke in the morning would have been of no avail had not this internal fire gone out before night, and no more smoke been seen after. They were still more positive that the elevations were pillars of basaltes, like those which compose the Giants' Causeway, in Ireland. On nearing the island a few days after, every one was satisfied they were trees, except our philosophers, who still maintained they were basaltes." To the commander "they had much the appearance of tall pines, which led to my giving that name to the island." At length Captain Cook landed, accompanied along with the Botanists. "We found the tall trees to be a kind of spruce pine, very proper for spars, of which we were in want. On this little isle were some which measured twenty inches in diameter, and from sixty to seventy feet high. My carpenter, who was a mast-maker, was of opinion that these trees would make èxceedingly good masts." The wood is white, close-grained, tough, and light. It appears, no perfect cones were found by the party. It is said "the first tree of this, noticed by Captain Cook (in 1774), as elevated like a tower, still (1850) stands, and is in a flourishing condition. Its appearance now is exactly that of a well-proportioned factory chimney, of great height." The young plants at the Royal Gardens of Kew grow very freely, in light loam and leaf mould. This Araucaria shoots out its branches like all other pines, with this difference, that the branches of these are much smaller and shorter, so that the knots become nothing when the tree is wrought for use. Captain Cook observes further, that the largest of the trees he saw had the smallest and shortest branches, and were crowned, as it were, at the top, by a *spreading* branch of shoots, forming quite a wide bush. The young leaves are about a quarter of an inch long, laying rather close to the stem, and the shoot clothed with its leaves is about one-third of an inch through, being the thickness of a strong goose-quill. Each branching head has ten or twelve of these shoots. The cones are about five inches long, and nearly as broad, of a brown colour. They are produced terminal on the shoots. It is a highly interesting, handsome, evergreen tree.

Billbergia thyrsoidea.—A perennial "Pine-apple"-like plant from Brazil; the leaves are not mealy, but of a bright green. The head of flowers is about six inches long, and three across. The bracts and flowers are of a rich crimson colour, very showy. It has bloomed in the stove at the Pine-Apple Place Nursery. (Figured in *Paxton's Flower Garden*, 74.)

Chœnostoma linifolium. Flax-leaved. (Synonym, C. fasciculatum.) From the Cape of Good Hope. It is a small growing shrub, very neat, and blooms profusely. The flowers are produced in terminal racemes, each blossom has a narrow tube nearly an inch long, the five parted limb (top of flower) is nearly half an inch across. They are white, with a yellow-mouthed tube. Seed sown, &c., the plant can be cultivated in all respects as a tender annual, and succeeds well under such treatment.

Commelyna scabra. N. O. Spider-worts.—It is a half-hardy, perennial plant, discovered in the north of Mexico, by Mr. Hartweg. It forms a tuft of straggling stems variegated with red. The flowers are terminal, eight to ten together; each blossom an inch across, of a purplish-brown colour. It does very well out of doors, in the border, in summer, but must be protected in winter.

Cynoches aureum. The Golden Swan Orchis.—A stove Orchideous Epiphyte, from Central America, introduced into England by Mr. Skinner. The flowers are produced in a close raceme of eight to ten inches long; each flower being three inches across, of a pale clear yellow. (Figured in *Paxton's Flower Garden*, 75.)

Echeverria retusa. N. O. House-leeks.—Mr. Hartweg collected seeds of this fine species in Mexico. It is a half-shrubby plant, fleshy leaves, and grows from one to two feet high. The flower stem is from nine inches to a foot long, bearing at its summit a compact panicle of handsome crimson flowers, covered with a delicate bloom, and orange-coloured inside. Each blossom is nearly an inch long, and half that across. This tribe blooms freely through winter, from November to April, either in the greenhouse or room window, flourishing in a light mixture of sandy loam with leaf mould, and plenty of sand. (Figured in *Paxton's Flower Garden*, 73.)

Echinocactus rhodophthalmus, var. ellipticus. Red-eyed.—The trunk is almost conical, tapering at each end. The spines are an inch and a-half long, of a reddish colour. The flowers are produced at the summit, of a rosy-pink colour; each being nearly three inches across. In the Kew Collection. (Figured in *Bot. Mag.*, 4634.)

Eucalyptus coccifera. Coccus-bearing Gum-tree.—A native of Van Diemen's Land, growing there on the mountains. There is a tree of it in the nursery of Messrs. Veitch, twenty feet high, having a very graceful appearance, and endures the open air uninjured. It blooms freely, trained against a wall, at the end of summer in the Royal Gardens of Kew. The leaves are lance-shaped, three inches long. The flowers are ornamented by very numerous yellow stamens, and produced in terminal many-flowered corymbous heads. Each blossoman inch across. (Figured in *Bot. Mag.*, 4637.)

LILIUM SINICUM. THE CHINESE LILY.—Mr. Fortune sent bulbs of it from China to Messrs. Standish and Noble, of Bagshot, in 1850. It requires to be grown in the greenhouse. Flower stem a foot high, bearing two or three small scarlet flowers.

OLEARIA GUNNIANA.—A moderate-sized evergreen bushy shrub, from Van Diemen's Land. A plant is trained against an open wall, in the Royal Gardens of Kew, where it flourishes and blooms copiously towards the end of summer and autumn. The leaves are small, something like those of some of the Ceanothuses. The flowers are white, with a yellow centre, daisy-like in size and form. It is a charming plant for a wall, or open ground in a warm situation, and very showy when in bloom. It succeeds well, too, in the greenhouse. (Figured in *Bot. Mag.*, 4638.)

OXYANTHUS TUBIFLORUS. LONG-FLOWERED. N. O. Rubiaceæ. (Syn. *Gardenia tubiflora.*)—A moderate-sized stove shrub from Sierra Leone. It has been for many years in the Royal Gardens of Kew. Leaves five inches long, broad. Flowers produced in terminal heads, six to eight together. The tube of each blossom is six inches long, about as thick as a wheat straw, the end terminating in a five divided limb, of narrow segments, the flower when expanded being two inches across; at first they are white, and change to a yellow white. (Figured in *Bot. Mag.*, 4636.)

SOPHRONITE CERNUA.—The plants belonging to this Orchid genus are found on old trees in Brazil, nestling among moss. They are of small size, but in bloom are very pretty. The above species has small flowers, an inch across, of a brilliant scarlet colour, with a yellow lip.

S. GRANDIFLORA.—The flowers are of a bright scarlet, or cinnabar colour, with a yellow lip. Each blossom is three inches across; very showy.

S. VIOLACEA. — Discovered in the Organ Mountains of Brazil. Flowers of a violet colour.

S. PTEROCARPA.—The flowers are produced in terminal racemes, of three in each. A blossom is an inch across, of a rosy-purple colour. (*Paxton's Flower Garden.*)

VIOLA PYROLÆFOLIA. PYROLA-LEAVED VIOLET.—This is the yellow-flowered violet which Messrs. Veitch sent out a year ago, under the name Viola lutea. No doubt they did not know it had previously been discovered, and named by Poiret, Viola pyrolæfolia. Messrs. Veitch's collector found it in Patagonia. It has been discovered in Chili, as well as the Straits of Magellan, and had been named by Cavanilles, V. maculata; by Dombey, V. glandulosa; and by Commerson, V. lutea megaphyllos. It is a beautiful flowering *hardy* herbaceous perennial plant.

ROSE PRUNING, &c.

BY MR. H. STILLWELL, OF PINE APPLE NURSERY, EDGEWARE ROAD, LONDON.

(Continued from page 31.)

In your last Number I noticed the best or proper time for pruning Roses generally. I shall here notice the best way how to manage or prune some of the yellow-flowering kinds. Under this head I shall notice the following:—

1. Double-yellow Scotch.
2. Harrison's yellow.
3. The Persian yellow.
4. Austrian.
5. Lutea, the yellow Banksia.

The above kinds, as well as many others I could mention, very much dislike the knife. The best time to prune or cut back some of these is as follows:—

Nos. 1, 2, 3, and 4, should be cut back as soon as out of flower in summer. By this method we shall get well supplied with new wood for the next season. Leave the thinning out until the following February. No. 5 at this time must be well thinned out (leaving too much wood is against the flowering of this Rose), and neatly nailed or tied, as circumstances may require. Cutting back is not necessary for this rose. Why I mentioned nailing or tying it, is because we find the Rose against the house or out-buildings generally.

CULTURE OF THE CAMELLIA.

BY MR. H. STILLWELL, OF PINE APPLE NURSERY, EDGEWARE ROAD, LONDON.

Noticing that a correspondent, in the March Number, requests information on this noble tribe of plants, I forward the following practical remarks, hoping they will prove serviceable.

The culture commencing from March.—We consider the plants now to be in full bloom, in a cool-house. Examine your plants daily to see if they require watering, as we now have increasing warmth from the sun. The plants, too, will require more attention, as to air, &c. As soon as they have done flowering, go through the whole of them, and with your knife cut away all ugly branches, taking care to form your plants neat and compact. After this is done, let re-potting be your next consideration. Shift those that require it into larger pots, and keep your plants in a growing state, placing them in a cool-house, or pit, as is most convenient to the grower, taking care to break the plants gently. Keep your plants here until you see they have completed their new shoots in growth, which you will see by the terminal buds. The next thing to be attended to is the situation where they are to be placed in the open air. It must be where they will be shaded from the heat of the mid-day sun; here they may remain till some time in September, that time, of course, will depend upon the state of the weather. When you bring them in, place them in a cool-house or pit, as they want only just to be kept from severe frost and excess of wet. Each year the plants require the same course of treatment, and no part of it requires more care than the pruning.

The compost used for the successful growth of the Camellia, we find, from some persons, vary very much. The following always answers admirably. Three parts good brown loam, one part peat soil, with a small portion of good sand, well mixed together, and having a liberal drainage.

CULTURE OF THE PHAIUS TRIBE OF PLANTS.

BY MR. JOHN WILLIAMS, OF HATCHAM HOUSE GARDENS.

THIS fine and interesting tribe of stove plant comprises several most singularly beautiful productions from China, some of which have long been inhabitants of our stoves, under the name of Limodorums, then Bletias, but now Phaius. We nevertheless frequently witness unsuccessful attempts to cultivate this plant, so as to ensure a fine show of its singular and beautiful flowers. When properly managed, few plants present a more gay appearance when in flower. We have here one plant, of P. grandiflora, in a pot twelve inches in diameter, which in November last, threw up nine stems, four feet long, each of which continued for three months to unfold a succession of its lovely flowers; we therefore flatter ourselves that we have been tolerably successful, and, consequently, venture to offer, for the consideration of your readers and inquirers, a few observations thereon; not, however, presuming to have it thought that no other method would be equally successful. The plant in question is one with many others (when growing in the limited space of a flower-pot), that may be greatly injured by being over-abundantly watered; any plants producing abundance of roots naturally suggests the idea of requiring abundance of food: but here it becomes the duty of the cultivator to inquire what that food should be. Water is, with undoubted propriety, considered to be the medium through which plants are supplied with food, and is generally applied with a liberal hand to such as are provided with abundance of roots: with the Bletia Tankervilliæ we may easily err; for although, as long as the soil is open, and the pots well drained, a liberal supply of this element may be required, yet when the plants have attained about the maximum of their growth, the pots will have become crowded with roots to such a degree as will very materially interrupt the passage of water through them: such being the case, water more sparingly, so as not to keep the roots in a constant state of saturation, and, on the other hand, not suffering them to become absolutely dry; for though the plant is so tenacious of life as to be able to live for a considerable time in either of those extremes, to succeed creditably, both must be avoided. The compost we use consists of equal parts of brown, strong loam, peat, and leaf mould, with a moderate portion of broken pot. Potting is regulated by the season of flowering, and may be performed immediately after the flowers are gone, when they are potted with balls entire; but when the plants are to be divided, it is better deferred until the young offsets have emitted their roots a few inches; they may then be carefully separated from the parent, and potted in pots of a smaller size. We have recovered unhealthy plants by shaking them out of the pot, and washing every particle of soil from the roots, repotting them in the compost above named.

POINSETTIA PULCHERRIMA.

BY AN ADMIRER.

This noble flowering plant is fully deserving the most earnest attention and careful management, in order that it may be so grown as to produce its flowers as perfect in our stoves as those grown at Philadelphia, where, it is stated, the beautiful scarlet whorls of bractæ which terminate the branches measure as much as twenty inches across, and are equal in colour to the finest tints of *Rosa Sinensis.*

It is decidedly a splendid feature among our ornamental winter blooming plants, and, from its habit, we feel confident it may be cultivated with the application of the common treatment given to stove plants. It must be kept in rather a close moist atmosphere in the stove, along with other tender plants, all of which are now and then syringed over when the weather is fine, in order to prevent the attacks of insects or the accumulation of filth. In the day, if fine, a free circulation of air is kept up; and at night the temperature of the house averages from 65 to 70 degrees. The soil used, and which seems to suit well, is very sandy loam; in potting, care is taken to ensure a good drainage, and as soon as the roots reach the inside surface of the pot, an additional shift is *immediately* given, so that the growth is never checked, and the plant in consequence is kept continually progressing. It requires a great supply of water at the roots. Plants procured in spring will furnish noble specimens for next autumn or winter's bloom; and a plant now cut down will supply cuttings which are easily struck in heat, and a stock of young plants for later bloom will be obtained. The large heads of rich crimson flowers are now in much request in London, and are fine ornaments in the dining and drawing-rooms, &c. Also the smaller sized specimens are taken to the assemblies by visitors.

PROPAGATING TREE PÆONIES.

BY A TRAVELLER IN CHINA.

I observe an inquirer has recently asked for instructions on this particular, and having resided in China for seven years (returning to England two years ago), I have seen a great deal of these plants propagated by the Chinese, and the following modes are adopted, with surprising success; not more than one in a hundred ever fails.

By Seeds.—These are often obtained very perfect, and to some extent seedlings are raised, sowing them in pots, and transplanting into the open ground to bloom, but this is not so generally practised as are the following methods.

By Suckers.—When suckers are produced by an old plant, the earth is carefully removed from about its roots, which are laid bare till the whole of the union of the sucker with the parent root is uncovered. They are then separated, but the wound of the whole plant is suffered to remain exposed for a day or two till its surface dries; dry earth is then placed about it, and care is taken that no moisture is applied for the space of a fortnight afterwards. The young sucker is enwrapped in fresh leaves, in which state it is kept till the lower end becomes shrivelled, and so much contracted, that the two opposite sides touch each other. It is then planted in rich earth, which is rather dry than otherwise, and kept well shaded till it has rooted; care being taken to guard it from frost.

By Splitting.—When the operation of splitting the stem is performed, an old plant is selected, and its stem is regularly slit into four or six equal portions, from *the top to the very bottom* among the roots; the divisions of the stem are kept apart until the wounds begin to dry, when the middle of the stem is filled with a sort of plaster, made with mortar and rich earth, among which is mixed fat and a small quantity of sulphur. The plant so prepared is suffered to remain till the autumn, when each division is fit to be separated, with the portion of the root belonging to it.

Grafting is practised on the roots of the more common Moutans; when this is attempted, the root of the stock is laid bare during some weeks, to the depth of three or four inches; just before the autumn shoot is made, the earth is again heaped about the root, and soon afterwards, when the sap appears in full motion, the operation is performed. This is done in the way we call crown grafting. A kind of clay made with rich mould, formed into a sort of mortar with the expressed juice of Herbaceous Pæony roots, is then applied about the scion and stock. The plant is afterwards shaded from the sun, and protected from frost during winter; and when the spring arrives, it is left to take its chance. If the scion ever pushes, all danger of losing it is past.

ORNAMENTAL CLIMBING PLANTS FOR THE FLOWER GARDEN.

BY A SOUTHERN FLOWER GARDENER.

Three years ago I had to thin a plantation of forest trees, and a number of Spruce Firs were cut down. The neatest formed tops of about sixty I had taken off from three to six feet long, and they were placed in an open dry shed, where the leaves gradually perished and dropped off. My object in making such a selection was, that when the leaves were all dropped off, I wanted to have climbing and trailing plants to run over the framework of these denuded trees. All the bark was stripped off, so that they had a neat and unique appearance: the side branches were left entire, and there being several tiers of these, retaining all their slender branchlets, they formed a novel and neat list of the best we annex below, plants of which may be obtained of the Nurserymen and Florists.

They are easy of cultivation, cuttings striking freely. The best time is from the beginning of March to the end of April, and such being potted off singly, and duly encouraged in growth, make fine plants to bloom through the following winter and spring. Cuttings should be obtained that are in a *growing* state, and it is advisable to place the plants from which cuttings are wanted at the early part of March in a warmer temperature, in order to push the shoots a little. Each cutting must be cut through close below a joint, and the stronger they are the more successfully they strike root. A mixture of fine sifted loam, and silver sand, equal parts, is suitable for striking in, having the pot about half full of broken crock, &c. When plants have shoots suitable for cuttings, they may be readily struck at any other season. They should be placed in a frame where there is a slight bottom heat, or be similarly assisted in striking.

The plant blooms well when grown in two parts good fresh loam, and one part in equal portions of well-decomposed cow-dung and leaf-mould, with a liberal sprinkling of silver sand, and small pieces of charcoal, also having a good drainage of broken pot and chopped turf over it. During summer the plants must be placed in the open ground, where they can be shaded from mid-day sun, and where they will have a free air; also to have a bed of ashes to plunge the pots in half their depth. Thus placed, they will require regular supplies of soft water, and when the young plants are about six inches high, cut off the leading shoots, which will induce the production of laterals, by which means the plants will be bushy, and by similar attention onwards they may be furnished from the bottom to the final summit with blooming shoots. Repotting must be done as the state of the plants require additional root room. Thus duly attended to, by the end of summer the plants will be furnished with a desirable supply of blooming buds, a weakly plant should not be allowed to retain more than its strength indicates, or it will soon perish. Before frost occurs, the plants must be taken in; such as are wanted to bloom first be placed in the greenhouse, and others into a cold-pit frame, or similar place of protection, and be introduced into the greenhouse at subsequent stages, if an extended period of bloom is desired.

The following varieties merit a place in every establishment:—

Attila, white and scarlet, flake.
Belle Zora, salmon, striped and mottled with crimson.
Cassandra, bright cherry crimson.
Gertrude, white and lavender, mottled.
Incomparable, deep rose, striped with crimson.
Isis, salmon and white, mottled.
Jupiter, bright crimson.
L'Enchanteresse, rose.
La Sermi, blush white and rose, mottled.
La Vestale, scarlet.
Le Zephyr, purple.

Madonna, blush, striped and spotted with crimson.
Nonpariel, blush white.
Proserpine, deep crimson.
Punctata, rose and carmine.
The Baron, white, mottled with rose on the edge.
Tour Pouce, blush rose stripes.
Union, crimson, mottled with white.

DWARF PHLOXES FOR EARLY ORNAMENT IN THE GREENHOUSE OR SITTING-ROOM.

BY ELLEN.

The hybridising of Phloxes has been most satisfactory in rewarding the necessary care in experiments. What might be the effect of instituting some similar experiments on that dazzling beauty, the annual *Phlox Drummondii*, patience and skill only can determine. To secure permanent and choice varieties of this is very desirable, and a perennial hybrid of such a partial parentage is quite a triumph in that of *P. dependens*. There are some of its natural seedlings of singular beauty in the collections of our florists; while others, probably still more perfect, could be produced through the many curious processes well known to the skilful experimenter.

These humbler Phloxes are, by the way, admirably adapted to parlour and in-door cultivation. A sod of *P. subulata*, var. *nivea*, in a frozen condition, and another similar piece of *P. stolonifera*, were potted in some good light soil towards the end of December last, and kept in a room at the average temperature of 55° Fahr. In about six weeks they began to flower profusely, and formed very pretty objects, requiring no other attention than a plentiful supply of water, and as much light and sun as was convenient. When deprived of the direct influence of the sun, a singular effect was produced; the fine rosy crimson of the blossoms of the latter were changed into a variegated purple hue. This little species, the *stolonifera*, is well known in almost every garden as a desirable spring flower; it is equally capable of gracing with beauty the windows of our sitting-rooms in winter. The snowy blossoms of *nivea* are equally attractive. Doubtless *P. ovata Listoniana* would do equally as well; and *P. divaricata*, with its beautiful light blue flowers, would be very elegant when growing in so early a season of the year. Also the *P. subulata*, and *P. Nuttallii*, a pale flesh colour with red eye, both being very pretty. The *P. prostrata*, too, with lilac flowers, is very neat, and being very early, renders it *doubly valuable*. Hybrids of these creeping and trailing kinds should be attempted, and the result would amply repay for every attention.

There can be no reason why all these dwarf sorts may not be so cultivated; and were they arranged, for instance, along the front lights of a greenhouse of ordinary temperature, they would furnish a most abundant bloom, to aid in making up bouquets, when flowers are so much needed, and often so scarce. Many of the out-door garden flowers are thus peculiarly fitted to add a grace and an effect to the more tender and delicate; but as we see them mingled with hundreds of others, in our flower-beds, we are apt to overlook their particular beauty and individual charms. And though they are the hardy children of northern and colder latitudes, yet they mingle well with the sunny beauties of more favoured climes, losing nothing by the comparison, and lending their happiest aid.

MISCELLANEOUS SECTION.

Cannas planted in the open flower-bed.—Mr. Cox, gardener to William Wells, Esq., of Redleaf, states in the Gardeners' Magazine of Botany, that he had a bed of scarlet Geraniums, in a situation that required some other taller plants to break the monotony which Geraniums alone produced, and that he therefore planted out six plants of Canna gigantea at two yards apart, through the large bed of Geraniums. The arrangement was much admired, the splendid foliage and bright red and yellow flowers, waving gracefully with every gust of wind, imparted an effect both lively and unique. For the outside of a bed he recommends C. coccinea, two feet high; then C. patens, three to four feet; and in the centre, C. gigantea, four to six feet high. *Abundance* of water is given, and occasionally a soaking of liquid manure. The plants are forwarded early in spring on the stove, then taken to the greenhouse, and the last week in May turned out in the open bed. After blooming, they are taken up, potted, and placed behind the stage in the greenhouse, and kept nearly dry till the end of January, when they are removed into an early vinery.

Cineraria maritima. Sea Ragwort.—Most of our readers know, it is often grown in the cottage window. Its neat formed winged leaves, as well as stems, appear as if coated over with frosted silver, and a few of them grouped among a bed of scarlet Geraniums, produces an interesting relief, and has a striking appearance, intermixed with the deep green leaves of Geraniums, and the brilliant scarlet flowers. Last summer there were two beds in a flower-garden filled with Mangle's silver-edged, scarlet-flowered Geranium, intermixed with Verbena aubletia, a purple flowering one, and the admixture produced a very pretty effect. There were other beds entirely of this Geranium, but the beauty of the former far exceeded the latter.

Propagating Pelargoniums by Buds.—By this term we do not mean budding, but putting in single buds or eyes as cuttings. This is a new practice, and is thus performed: 1st, make a shallow pan ready for them, by first putting in a portion of pure loam and sand, then a covering of pure sand alone, give a gentle watering to settle it, and then prepare the buds. Take a shoot of moderate strength, cut off the leaves, but not quite close to the stem, then cut off the two lowest buds, leaving about a quarter of an inch of wood below each bud. After that, split the shoot containing the two buds down the centre. If the two buds are not exactly opposite, but one a little below the other, the upper one must be shortened below the bud to the proper length. The upper cut should be very nearly close to the bud. Make a sufficient number ready at once to fill the pan or pot. When that is done proceed to plant them, using a short blunt stick a degree thicker than the bud-cutting. Insert them deep enough, so as only to leave the bud just above the sand. Plant them close to, and round the edge of the pan, placing the cut side close against the pot, which will of course place the bud side inwards. Then fill up the holes with a little dry sand, and water gently again. Place them either in a propagating-house, a shady part of a stove near the glass roof, or in a frame placed under the circumstance described at the page referred to above. Shade from bright sunshine in whatever situation they are placed, and water as required. The buds will soon break and show leaves shortly to be followed by a shoot. This will soon require roots to support it, and will send down sap, which will cause, first, a callosity or swelling, and then roots. Now, this method has the advantage over a cutting with leaves, of having a less surface for evaporation, and for damp to take hold of, consequently the bud is not so liable to perish from the juices drying up, or from the moisture acting upon the non-growing leaf, and so causing it to decay before roots are produced. At the same time, we candidly confess that this way of increasing Pelargoniums is new, and its success, as our northern neighbours would say, *not proven*, but reasoning from analogy in the well-known successful practice of raising vines from eyes or buds; we judge there is little fear that it will be completely successful, we invite our readers to give it a fair trial, and communicate the result. The buds that have been put in, have, at Pine-apple Place, so far, progressed satisfactorily, not one having, as yet, perished.—*T. Appleby*, *Cottage Gardener.*

[We have seen this method of propagation with Pelargoniums and almost every other of the general class of stove, greenhouse, and half-hardy plants, very extensively practised by a friend of ours during the last three years, and the success is quite astonishing. Some plants that have been considered (almost universally) very difficult of increase were striking root under his treatment, with the greatest freedom, and in a short period. He uses the white sand in almost every instance, and has the pan, or pot, with a liberal drainage.—EDITOR.]

EFFECT OF LIQUID MANURE ON CINERARIAS.—Your leading article on the use of liquid manure, at page 83, has induced me to send you a leaf taken from a Cineraria which has been grown to its present size almost entirely by the use of weak liquid manure. I have thirty pots (8-inch) of seedling Cinerarias, three plants in a pot, and most of them measure two feet, and some two feet six inches in height, from the top of the pots. The leaf which accompanies this is a fair sample of their lower foliage, and from it you will be able to form some idea of the appearance they present. The soil, or rather I ought to say sand, in which they are grown was taken from the surface of a sandy lane last spring, and was mixed, when used, with about one-third leaf-mould. In the bottoms of the pots, above the drainage, I put some clay and burnt earth, to act as absorbents; and since the plants have been placed in the 8-inch pots, I have watered them constantly with liquid manure collected from the farm-yard, and used at about the rate of one gallon of liquid to twenty gallons of water. They are just now showing flower, and promise to form objects of beauty in the conservatory for some time to come. I also send a foot-stalk from one of the lower leaves of a plant, upon which I was trying the effects of strong doses of liquid manure, *i. e.*, " half-and-half;" the foot-stalks became shrivelled and blotched, the leaf turned " flabby," as if it had been suffering from want of water, and it eventually died off, from no other cause, apparently, than the use of over-strong liquid manure. To plants grown for the sake of their seeds or fruit, apply liquid manure from the time when they are in flower until the seeds or fruit begin to ripen; and to plants grown for their leaves or roots from the commencement of their growth.—S. M. [The two leaves which accompanied this communication measured seven inches in length, nine inches in breadth, and twenty-six inches in circumference. They were deep green, and in admirable health, with foot-stalks six inches long and three-quarters of an inch round.]—*Gardeners' Chronicle.*

THE POLYANTHUS.—When in bloom, every beholder admires these lovely flowers, and, as Mr. Slater observes in the *Floricultural Review*, the following list will show how little has been done to add to this beautiful flower during the last thirty years.

In 1821, the only Polyanthuses shown, that are now known, are—Stead's Telegraph, Fletcher's Defiance (scarce), Yorkshire Regent, Emperor Buonaparte, Crownshaw's Invincible, Turner's Princess, Beauty of Over, Pearson's Alexander, Cox's Regent, Fillingham's Tantarara.

In 1822, the following were added to the list—Eckersley's Jolly Dragoon, Nicholson's Bang Europe.

In 1826, Collier's Princess Royal, Nicholson's Gold Lace.

In 1833, Buck's George the Fourth, Clegg's Lord Crewe, Sir Sidney Smith, Youd's Independence, Maud's Beauty of England, Bullock's Lancer, Faulkner's Black Prince.

In 1840, Hufton's Lord Lincoln, Barrow's Duchess of Sutherland.

In 1844, Nicholson's King, Gibbons' Royal Sovereign, Clegg's Lord John Russell, Saunders' Cheshire Favourite, Hufton's Lord Rancliffe, Barnard's Formosa.

In 1846, Hall's Premier Peel (not distinct enough from Lord John Russell).

The best in cultivation, as known in this neighbourhood (Manchester), are the following, and we have placed them as they gradually increase in price:—

Buck's George the Fourth.
Bullock's Lancer.
Cox's Regent.
Hufton's Lord Rancliffe, *alias* Prince of Orange and Golden Hero.
Fillingham's Tantarara.
Nicholson's Gold Lace.
Nicholson's King.
Pearson's Alexander.
Stead's Telegraph.
Brown's Free Bloomer
Clegg's Lord Crewe, *alias* George Canning.
Collier's Princess Royal.
Saunders' Cheshire Favourite.
Crownshaw's Eclipse.
Crownshaw's Exile.
Crownshaw's Invincible.
Hufton's Earl Grey, *alias* Lord John Russell.
Maud's Beauty of England.
Nicholson's Bang Europe.
Hufton's Earl Lincoln.
Addis' Kingfisher.

The following AURICULAS obtained the first, second, and third prizes at the aggregate of shows during 1851. They may be depended upon as being of first-rate excellence:—

Green-edged Class.—Page's Champion, Oliver's Lovely Ann, Ashton's Prince of Wales, Lee's Colonel Taylor, Pollitt's Standard of England, Lightbody's Star of Bethlehem, Hudson's Apollo, Booth's Freedom, Litton's Imperator, Ollier's Lady Ann Wilbraham, Yates' Morris Green Hero, and Pollitt's Highland Laddie.

Grey-edged.—Sykes' Complete, Oliver's Lovely Ann (shows also in green-edged), Waterhouse's Conqueror of Europe, Fletcher's Ne Plus Ultra, Fletcher's Mary Ann, Barlow's Morning Star, Beauty of Wydham, Wood's Lord Lascelles, Cheetham's Lancashire Hero, Kenyon's Ringleader, and Grimes' Privateer.

White-edged.—Taylor's Favourite, Lee's Venus, Popplewell's Conqueror, Cheetham's Countess of Wilton, Ashworth's Regular, Lord of Hallamshire, Catharina, Ashworth's Rule All, and Hepworth's True Briton.

Selfs.—Netherwood's Othello, Berry's Lord Lee, Redmayne's Metropolitan, Clegg's Blue Bonnet, Spalding's Metropolitan, Smith's Mrs. Smith, Hufton's Squire Mundy, Barker's Nonsuch, and Whittaker's True Blue.

EVILS OF INDISCRIMINATELY WATERING PLANTS IN POTS IMMEDIATELY AFTER BEING SHIFTED.—To insert cuttings of plants, particularly those of a soft, woody, or succulent nature, into moist materials, before the wounds made in preparing them are healed over, is often attended with fatal consequences, from the moisture finding its way into the pores of the plant, thereby causing putrefaction and decay. The woody parts of plants being more consolidated and less porous than their roots, are altogether less calculated to imbibe an undue portion of moisture, yet we find that even these do so to a most injurious extent; therefore, we may reasonably conclude that roots mutilated and placed in the same circumstances would have a greater chance, from their peculiar organization, to suffer from such a cause; nor can there remain a doubt that they do so. This points out as most injudicious, the practice of turning plants out of their pots reducing their balls, as the case may be, thereby lacerating every fibre, and placing every rootlet in a worse position than a cutting, and then finishing the operation by giving a good drenching of water, which, as we have already seen, must make direct havoc among the previously reduced channels by which the plant receives its food. Such is, in a great measure, the cause of delicate plants suffering so much from shifting, of the check they receive, unless the operation be carefully performed, and consequent loss of time in recovering from its effects. Still this is an every-day practice, that has descended to us hallowed by the custom of ages, and sanctioned by the highest authorities. Who ever heard of directions for shifting or potting plants, that did not end thus: Give the whole a good watering, to settle the mould in the pots, and the operation is completed? After shifting or transplanting plants in hot weather, when a dry atmosphere causes, by excessive evaporation, an unusual drain upon the roots, the necessity of a supply will soon become apparent; and administering it under such circumstances is less injurious than under any other, from the activity maintained in every part of the plant, rendering stagnation an unlikely occurrence. But even then, when practicable, it is better to confine them in a close moist atmosphere, which, with water overhead and shade, will enable them to exist through the medium of the leaves until growing has commenced, and the roots are in a condition to receive, without injury, the necessary supply. It is, however, when there is a deficiency of heat, vegetation languid, and a corresponding danger from excess of moisture, that such precaution is most required, and the contrary practice most hurtful. Among seedlings of tender sorts, the mortality from such maltreatment is truly great; and when the impossibility of transplanting such without, in some shape, hurting their few and almost unformed spongioles, scarcely more consolidated than the fluid in which they are thoughtlessly immersed, is considered, their certain destruction is not to be wondered at. The advantages these derive from the treatment described, led me first to examine more closely what I deem a matter of much importance. Before quitting the subject I may add, that the injury inflicted by such treatment is not confined to plants alone; the soil, also, is oftentimes irreparably injured. It has been placed between the sides of the pot and the root-bound ball containing the plant, where, being in a comparatively loose state, it receives the whole of the water that is considered sufficient to moisten the whole mass; as, where there is so little resistance, it is as effectually repelled by the hard, and much more by a dry, ball as by the sides of the pot. This reduces what has been added to the condition of a puddle, and in this state it stands a good chance of being baked as hard as a brick. At all events, it has been totally unfitted to afford that nourishment to the plant it otherwise would have done. Such consequences may be avoided by applying moisture gradually; but if some time is allowed to elapse, there is not so much to fear, even from the usual soaking, as the old and new material must, in the interim, have become equally dry; a state, let it be remembered, indispensable to the thorough incorporation of such materials.—*Hovey's Magazine of Horticulture.*

CANTUA BICOLOR.—Having heard this plant complained of as being a shy bloomer, even so much so as to render it unworthy of cultivation, I beg to inform your readers that I have now a specimen of it in *great beauty*, which has been treated in the following manner. In the spring of 1850, I struck a small cutting of it, and continued growing it in the most rapid manner I could in a moist stove until the autumn of the same year, when it was gradually hardened and kept in a cold greenhouse through the winter. In spring I shifted it into an 8-inch pot, placed it in a vinery where there was bottom heat (the house being warmed by Polmaise improved), in which it grew rapidly until Midsummer. I then gradually inured it to the open air; water was withheld early in autumn, and it was placed on a north border until October, after which it was put in a cold house. In the second week in January it was placed again in the vinery, and it is now covered with flowers in every stage of development, forming a beautiful object in the conservatory. The soil which I use for it is equal parts peat, leaf-mould, and loam, with liberal drainage.—*R. Pettit, Gardener to Sir H. E. Bunbury, Bart., Barton Hall, near Bury St. Edmunds. (Gardeners' Chronicle.)*

FLORAL OPERATIONS FOR THE MONTH

SEE that the proper quantities of plants, seeds, &c., are in due course of preparation for the summer display. Plans of flower-gardens, &c., should be sketched on paper, and the appropriate regulations for future arrangement and plants required be put down; this attention is of much assistance.

In the Flower-Garden.—Last month was the best time for grafting shrubs, as Thorns, Limes, &c., but late-growing kinds may still be done, as Rhododendrons, &c.

Annuals, hardy, such as Clarkia, Nemophila, Larkspur, &c., may still be sown in the open bed Seeds of *Biennials*, too, should now be sown in beds, such as Hollyhocks, Sweet Williams, Scabious, Canterbury Bells, &c. Also seeds of *Perennials*, as Phloxes, Campanulas, &c. Finish planting out Biennials and Perennials, and dividing large patches of border plants. Hollyhocks must be put in immediately; water them as soon as planted. Newly-budded trees, that is those budded last season, should be looked over, and if any portion of the stock be pushing shoots, they must be rubbed off, so that the entire strength should go to the new shoot engrafted.

Auriculas and Polyanthuses.—Give air freely on all suitable occasions, to prevent the flower-stems being drawn up weakly. The blossoms will soon be opening; no water must be allowed to fall upon them, and they must be shaded from hot sun.

Pinks.—If beds of them are required, make them immediately. A loamy soil, made of turfs a few inches thick, and well rotted, with an equal portion of old decayed cow-dung, is admirably adapted for their growth. It should be nine inches deep, and have a good drainage below. The plants must be removed with as much of the ball of soil as possible, and be planted six inches apart. High raised beds are not beneficial, except in low, wet situations. Autumn-planted beds should be top-dressed with a little rich soil, and the plants be made firm in their places; a few small sticks stuck around amongst the shoots will prevent twisting off.

Ranunculuses and Anemonies.—When the plants are risen an inch or two high, have the soil pressed closely around them with the hands, stopping up any holes made by worms, &c. A top-dressing, too, of rich compost, free from wire-worm, is very beneficial. Often stir up the soil between the rows. Showers of rain are very beneficial for their growth; if none fall, water with *soft* water in the morning: well-water is injurious. Weak manure-water occasionally poured between the plants contributes to vigour.

Tulips.—Stir the surface of the bed an inch deep. Protect from *hail*, FROST, and *strong wind.* Keep the soil firm around the stem, the end of March, before the shoots on the last year's plants begin to push; the wood is not liable to rot, soon strikes root, and, being early potted off, they have several months to grow in, become bushy and well ripened, to stand through winter, and the second season make fine blooming specimens.—*A London Practitioner.*

Cape Geraniums.—These are arranged into two sections, viz., the *bulbous* and the *shrubby*. The former comprises ardens, bicolor, discolor, triste, flavum, and others; the latter, echinatum, quinque vulnerum, flexuosum, fulgidum, and many others. Some beautiful kinds have been exhibited in collections during the last three or four years, at Chiswick and other London shows. During the last two seasons attempts have been made to cross these and the fancy class, with a view to obtain a larger race of flowers. These Cape sections have been tried out in the open beds, in warm situations, and they succeeded admirably, especially the shrubby class. We saw some small beds of them last season—a bed of a sort—dwarf, bushy plants, which were exceedingly beautiful. Once had, they increase rapidly, and a stock is easily kept.

Hortus Siccus.—In studying Botany, it is of advantage to prepare a book of dried specimens of plants; such a book is termed Hortus Siccus, a dry garden. Choose from a plant a specimen having flower, bud, leaf, and, if possible, seed. Lay it upon thick blossom blotting-paper, placing one or two sheets of the same over it; upon which, unless the specimen be very succulent and thick, lay another specimen, and then more paper. Care must be taken to lay each part of the specimen smooth and flat upon the paper; no part of the specimen should be under another part; cut off any portion that is inconvenient to retain; if any bud or flower be too thick, pare off some of the under side to make them lie properly. When they are arranged, put a heavy weight upon them,—after a few hours, carefully shift the position of each specimen to a dry part of the paper, and replace the weight; repeat this, changing the paper, if necessary, until the specimens be perfectly dry. Prepare a solution of gum with a little camphor in it, and secure each specimen to a page in a folio of cartridge or whity-brown paper; then write under each the name of the plant, class, order, tree, shrub, herb, country, &c. In the case of any specimen being very full of sap, a hot iron may be passed two or three times over the covering of paper—taking care not to burn it. Now is the season to begin.—*Flora.*

On the tree Mignonette.—Last year I treated some plants of Mignonette, in order to make them shrubby, as follows:—The plants were two feet high, and produced a large head of blossoms. I am sure it is well worth the attention it requires. In a 48-sized pot I potted one good plant, in a very rich loamy soil. In five weeks afterwards I removed the plant, ball entire, into a 36-sized pot, using the same kind of soil. As the plant pushed forth, I pinched off all side shoots, allowing the leaf to remain from which the shoot pushed. The plant showed bloom when about ten inches high; I pinched it off, and it caused the top lateral shoot to push upwards for a leader, which I trained for the purpose. On reaching two feet high, I cut off the blossom, and encouraged about eight of the best shoots for blooming. They flowered profusely last autumn, and now are real pictures of beauty and fragrance, and I expect will continue so through the season. I potted off one-half of my plants early in May, 1850, and the other early in June. At the end of April, 1851, I re-potted the plants into 24s, keeping the ball entire. I placed the plants at first in a melon frame, and when six inches high, took them into the greenhouse where I have kept them till now.—*Clericus.*

Tropæolum Lobbianum.—There is a plant of it in the gardens of the Duke of Cleveland, at Raby Castle, near Durham, trained to a trellis against a back wall, which covers a space of thirty feet long by twelve feet high, and has been in bloom ever since last November, producing tens of thousands of its bright orange-scarlet flowers. It has been, and still is, a perfect gem, growing very vigorously, and there are thousands of blossoms yet to come out. The plant is grown in a border, in strong hazel loam, mushroom bed dung, and charcoal well incorporated together, and turned in a rough state. It has occasional waterings of liquid manure, a quart of that to a gallon of water is about the proportion given. It is a fine plant for trellis, pillar, or if grown in pots for training round any framework. It grows very freely, and cuttings strike root very readily. It is a charming plant, too, for the flower-garden, either supported erect, or prostrate over a raised bed.

Destruction of Green-fly Insect.—Mr. Ayres, of Brooklands, Blackheath, near London, states that he has succeeded to satisfaction in fumigating his plant-houses as follows:—A short time back, having no tobacco-paper, and not liking to give 4*s.* 6*d.* per pound for tobacco, I made an experiment of a small quantity of tobacco and Cayenne combined, and am delighted with the result. Choosing a damp still night, about two quarts of glowing fire was placed upon a wire sieve, and that was elevated upon three bricks in the pathway of the centre house, (three being smoked at the same time) to increase the draught. Over the fire some nitre-paper, torn into small pieces, was placed, then a handful of damp stable litter, and then the tobacco, which had been damped and thoroughly impregnated with the pepper. The quantity used was 6 ozs. of tobacco, and 2 ozs. of Cayenne, the expense being about 3*s.*; and the houses were ninety feet long, sixteen feet wide, and tolerably lofty. One hour after the fire was out, not a living insect could be found; and I am quite sure the tobacco and Cayenne did fully as much execution as when we used 7 lbs. of tobacco-paper, at an expense of 10*s.* 6*d.* The Cayenne was a common kind, which I purchased at 8*d.* per ounce; but no doubt common Chillies would be better than adulterated pepper, and these I intend to grow for my own use this season. Thus you see "fumigators" are rendered useless; a very small quantity of tobacco with Cayenne is sufficient, and what is still better, the horrible stench of strong tobacco or tobacco-paper is got rid of; for with the small quantity used, the smell is driven quite off in twenty-four hours. Let me, however, caution the reader that the tobacco and Cayenne, in addition to destroying insects, are an excellent recipe to "catch a good cold;"—for myself, my foreman, and an assistant, had each to pay that penalty for our knowledge. It is, however, quite unnecessary to enter the house if the fire is properly lighted at the first start, and the paper, litter, and tobacco are damped at the time they are put on. If the sieve is placed near the door, then by opening it a little the draught is increased, and the necessity for entering entirely obviated." (The same kind of materials consumed in the Fumigator, and applied through that medium, of course will produce similar effects, and it is very probable a much less quantity of material would be required by using the Fumigator.)—A. Z.

Stove Climbers.—I shall be obliged by having a list of some of the best of these plants, amongst which I desire a few of the Passifloras may be included.—F. C. J.

Stephanotus floribunda, white.
Allamanda Schottii, deep yellow.
Bignonia venusta, fine buff.
Hoya carnosa, flesh colour.
—— campanulata, sulphur.
Ipomœa Learii, blue and red.
——— Horsfallii, rosy-crimson.
——— tyrianthina, purple.
Gardenia Sherbournii, white, dark centre.
Dipladenia crassinoda, blush.
Mandevillea suaveolens, white.
Combretum grandiflorum, scarlet.
Tacsonia manicata, bright scarlet.
——— splendens, rose.
Bougainvillæa spectabilis, pink.
Passiflora alata, red, blue, and green.
———— edulis, lilac and blue.
———— elegans, scarlet and blue.
———— kermesina, crimson.
———— racemosa elegans, scarlet.
———— Loudonii, red and purple.
———— quadrangulans, green and blue.

The above are free growers, and will extend any moderate length. There are others of a dwarfer growth, equally pretty.

On destroying Slugs, &c.—The best means "An Old Carnation Grower" can use to destroy slugs, &c., is to dissolve two drachms of corrosive sublimate (poison) in two gallons of boiling water, and water his plants with the solution; it will also be necessary for him to take every pot out of the frame, and pour in the hole at the bottom a small quantity of the solution, as this is where they generally secrete themselves. He need not be afraid to use this, as it is perfectly innoxious to the plants; indeed, I always fancy it does them good, as it improves their verdure. This solution will also cause worms to rise out of the ground, if poured upon any bed at the close of daylight, when they may be gathered up and destroyed. I will now correct an error in my Article on the Carnation; the pots used should be four to the cast, instead of sixteen, as there stated.—*A Florist.*

On the Cultivation of Alstrœmerias.—I should be much obliged if some correspondent who cultivates the Alstrœmeria successfully, would furnish me with a few particulars of management; I cannot get them to bloom well either in pots or the open border. An early attention will much oblige—*Maria.*

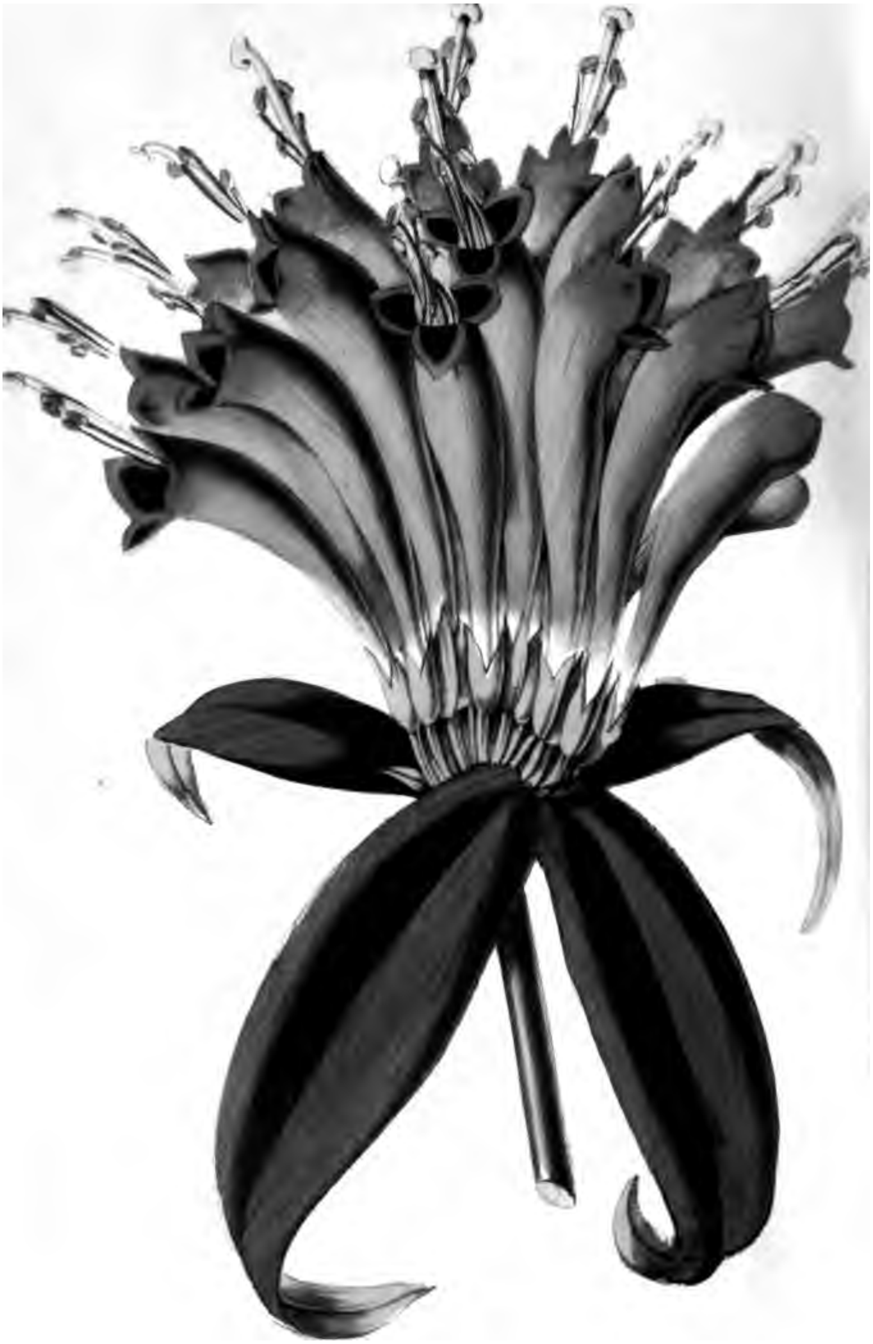
List of showy Border Flowers, &c.—I and several friends, having small gardens entirely devoted to flowers, are much in want of a list of showy herbaceous plants; there are annually numbers of these plants for sale at the various seedsmen in town, but we have no knowledge of their character whether showy or not; and if any of your correspondents would favour us with a list of the names, height, colour, and month for blooming, it would be rendering us a great service.—*A Collector of Herbaceous Plants.*

VIGOROUS FUCHSIAS.—I have been an ardent admirer, cultivator, and exhibitor of the Fuchsia for near twenty years, consequently in this particular I am a practical Fuchsia grower. The largest flowers of any kind, I have uniformly had upon plants of from one to four years old. A cutting struck early in spring. duly attended to, will that year make a vigorous blooming plant from two to four feet high. At the close of the blooming season, the plants are placed behind the plant stage, kept *nearly dry* till February. I then shake off the soil from the roots, and cut off all the side branches to one or two buds, leaving only the main stem thus denuded, taking off several inches of its top. The plant is repotted in equal portions of loam, well-decomposed manure, and turfy peat, with a sprinkling of bits of crushed bone and charcoal. I have a low double-roofed forcing-house with a bark bed in the middle. About ten days after being potted I plunge them in this bed, of gentle heat, and they soon push vigorously. When the new shoots have pushed two or three inches long, I thin all away except sufficient to form the plant properly, and such shoots I have them distant, in proportion to the proportionate size I am desirous to have the flowers. I keep the plants in the bark-pit till the appearance of blooming buds upon the new shoots. The flowers which such shoots, thus proceeding immediately from the main stem, produce, are surprisingly larger than those plants produce under the general mode of treatment which is pursued.

The same plants are bloomed, shoots cut close in, repotted, and moist bottom heat given, "which is very essential," for three successive years; then being provided with year old plants, I put away the former, and proceed with the culture of the younger ones. Plants so treated make beautiful specimens, each year becoming a little higher. Manure-water is given once a-week during the growing and blooming period. Some kinds of Fuchsias will push shoots from the old upright stem when the previous year's ones are cut *clean away*. When such do push, I retain them in preference to those which proceed from the short part of the last year's side-shoot, having the former I rub off the latter. The softer wooded kinds push most freely from the *main* stem, and many of such habit I have cut the previous year's side-shoots wholly off. No Fuchsia grower need fear to prune thus severely. The delicate wiry-wooded ones do not so certainly push from the main stem after the plant is two years old.—*A Middlesex Man.*

ON ANSWERING QUERIES, &c.—I venture to assert, in the name of the greater half of your readers, that if you could induce your contributors to answer queries, or would shortly answer all arrears every three months yourself, it would render your publication still more valuable to unscientific subscribers, who, without putting questions themselves, would be great gainers from the doubts and suggestions of others. You must understand this remark is applied to questions which refer strictly to the cultivation of plants, for you cannot be expected to furnish your readers with taste as well as knowledge; or to fix upon the prettiest flowers for those who cannot choose for themselves.—*A Constant Reader.* (We hope our friend's hint will have the attention of our readers. We will do our part.—CONDUCTOR.)

PRUNING CAMELLIAS. WILL THEY BEAR IT? WHEN IS THE BEST TIME?—To the first I reply, few plants bear it better. To the second, as soon as they have done flowering. Large unwieldy plants may thus be reduced, and kept in pots if desired. If in good condition, they may be cut in to the old wood with impunity, especially if not more than from two to four years old; but then they must be kept in a close, moist atmosphere, and a temperature as near 60° as 50°. I have broken old stems very successfully in a dung heat. Those who recollect the hospital described for sickly oranges will not be far from the mark. A shady place in a forcing-house is a good substitute, especially if some moss is kept moist round the stems. The plants must break freely before they are either shifted or planted out. If the latter is done, a little pruning will only be wanted occasionally, if the compost is not too rich.—*R. Fish.*—(*Cottage Gardener.*)



Æschinanthus splendidus.

MAY, 1852.

ILLUSTRATIONS.

ÆSCHYNANTHUS SPLENDIDUS.

"Come, Cynthia, come! in town no longer stay;
From crowds, and noise, and folly, haste away;
The fields, the meads, the trees are full in bloom,
The vernal showers awake a rich perfume."

"Ye field flowers! the gardens eclipse you, 'tis true,
Yet, wildings of nature, I dote upon you,
For ye waft me to summers of old;
When the earth teem'd around me with fairy delight,
And when daisies and buttercups gladdened my sight,
Like treasures of silver and gold."

A drawing of this most beautiful flower was sent us by Messrs. Lucombe, Pince, and Co., Nurserymen, of Exeter. Many of our readers are aware that, during the last ten years, some very handsome species have been introduced into this country, and are highly ornamental in the stove collection of plants. The one we now figure proves to be a valuable acquisition to the greenhouse, or even pit-frame; and in consequence, all who possess these latter-named structures may successfully cultivate this most charming, showy, blooming plant. It is an hybrid, raised by the above-named nurserymen, who handed us the following particulars, which were extracted from the *Magazine of Botany*, December Number, 1851.

"A hybrid production, and a very beautiful one, raised by Messrs. Lucombe, Pince, and Co., of Exeter, to whom we are indebted for the specimens from which our drawing was made. It was raised, as we are informed, from Æ. speciosus, impregnated by Æ. grandiflorus, and possesses the abundant flowering habit and erect growth of the former, and in brilliance of colour and marking even exceeding the latter. It is, no doubt, the finest of its race, which, as is well known, now contains many very splendid imported species. We are informed by Mr. Pince that his specimen plant of this hybrid had a bunch of flowers upon every shoot; each of the bunches in the specimens sent us numbering upwards of a score of blossoms. This plant had been grown all the summer in a cold pit, without any artificial heat whatever. No doubt, it will prove a most useful ornamental plant, of very easy culture, and the brilliance of its large clusters of flowers will make it conspicuous, even among the most showy plants. The flowers were communicated to us early in October last."

This tribe of plants flourishes in a compost which consists of a considerable part of vegetable matter, and having a free drainage. The compost must be broken, and kept in a rough state. Some of the kinds are of a drooping habit, and are grown in suspended baskets or pots, and the branches hang over the sides. The one we now figure is an erect, stiff-growing, shrubby plant; and, blooming so freely, renders it one of the most beautiful and ornamental plants, and deserving a place in every collection. It strikes readily by cuttings inserted in sand and rotten leaf-mould, placed where there is bottom heat. Messrs. Lucombe, Pince, and Co., deserve to be amply repaid for the production of such a brilliant blooming plant. When the plants have ceased blooming they require a season of rest, after which they should be repotted and started into growth again. Having several plants, and doing this at various successive times, some may always be had in bloom throughout the year.

"Where'er I cast my wondering eyes around,
The God I seek, in every object 's found;
Pursuing Thee, the verdant fields I pass,
And read Thy name in every blade of grass;
Beauty complete, and majesty divine,
In all Thy works, adored Creator, shine."

NOTES ON NEW OR RARE PLANTS.

Abelia uniflora.—An evergreen, smallish, erect-growing shrub, from the North of China. The flowers are produced singly, funnel-shaped, white, with a deep violet tinge on the upper side. In Messrs. Standish and Noble's nursery, Bagshot.

Acacia undulæfolia. Leguminosæ.—This species was introduced in 1824, and has been cultivated in the collection of Messrs. Henderson, Pine-Apple Place, under the name of *olcæfolia*. It is a pretty shrub, about four feet high. The flowers are in round heads, of a bright yellow, and freely produced. (Figured in *Garden Companion.*)

Begonia strigilosa. **Bristly.**—From Central America. It has a creeping stem. The flower-stalks rise a foot high, and the blossoms are in large corymbs, a bright red colour. A very pretty plant for the stove, or warm conservatory.

Benthamia fragifera. Corneæ.—A Plate of the fruit of this fine tree was given by us fifteen years ago, and fine trees of it are now growing in the south of England, which flower and fruit in abundance. It is most esteemed for its beautiful fruit, which are in branching clusters; each fruit being nearly the size of a nectarine, and of a deep orange red. It is a showy tree, and merits more extensive cultivation. (Figured in *Bot. Mag.*, 4641.)

Beschomeria tubiflora. Amaryllideæ.—A plant introduced from Mexico to the Royal Gardens at Kew. It produces an erect flower-stem, of about four feet in height, each flower-tube two inches long, green, with reddish-purple streak. (Figured in *Bot. Mag.*, 4642.)

Bilbergia Moreliana. Bromeliaceæ.—A new species, somewhat like B. zebina, but the bracts and flowers are higher coloured. It was introduced from Brazil, and has been cultivated by M. Morel, of Paris. It is certainly one of the prettiest of the tribe. (Figured in *Paxton's Flower Garden.*)

Callixene polyphylla.—This plant is of the Lilywort tribe. It is the Luzuriaga erecta of Kunth, very similar to the L. radicans, but the flowers are white, speckled with brown. Messrs. Veitch's received them from Mr. Lobb, who thinks they will succeed in England on elevated parts of the mainland.

Canna sanguinea. Marantaceæ.—A new species of Canna, introduced by M. Warczcwicz from Costa Rica in 1850. It grows about three feet high; flowers of a deep crimson red. It is easy of cultivation, and flowers well in the open border during the summer months. In the autumn it should be potted, and placed in the greenhouse till spring. (*Paxton's Flower Garden.*)

Cheirostemon platanoides.—A greenhouse tree, which was observed in Mexico when that country was discovered. The natives made a kind of pilgrimage to it, and collected the flowers for amulets. Hartweg found it a few years ago on the mountains of Acatenange, forming trees from fifty to eighty feet high. There is a plant of it blossoms in one of the great conservatories in Paris which is thirty feet high. The leaves are very like those of the Plane-tree. The flowers are bell-shaped, drooping, each being near two inches long, of a purplish-brown colour. (*Flores des Serres.*)

Catalpa Pottsii. A native of Mexico. A bush, growing from four to six feet high. Leaves leathery, lance-shaped. The flowers are of a Bignonia-like form, pink, two inches long. It is a half-hardy shrub, introduced to the Royal Gardens of Kew.

Cymbidium Mastersii.—Messrs. Loddiges obtained this stove orchid from the East Indies, and named it after Mr. Masters, assistant in the Calcutta Botanic Garden. Petals and sepals narrow, white tinged with yellow; lip white, stained with rose. Each flower is about four inches across. (Figured in *Paxton's Flower Garden*, No. 78.)

DENDROBIUM AQUEUM. THE WATERY. Orchideæ.—From the East Indies. It has bloomed in the stove in the Royal Gardens of Kew. It is a robust plant. The flowers are produced along the erect stems from the axils of the leaves, two or three together at each. The flower is two inches across, of a creamy white, with a yellow spot at the bottom of the lip. (Figured in *Bot. Mag.*, 4640.)

GASTROLOBIUM CUNEATUM. PEA-FLOWERED. Leguminosæ.—Mr. Drummond discovered this pretty shrub in Australia, and it is cultivated in the nursery of Messrs. Henderson, of Pine-Apple Place. It is a dwarf branching shrub, with narrow leaves about an inch long. Flowers (pea-formed) of a rich yellow, with a deep crimson keel. It merits a place in every greenhouse. (Figured in *Magazine of Botany.*)

GESNERA PURPUREA.—We do not know from whence this very handsome plant was introduced into this country, nor the period when. It is in habit much like G. Douglassii, and in consequence, it has been supposed to be an hybrid production between G. Douglassii and G. discolor. It is, however, one of the most striking of this noble tribe of plants, and is far handsomer than either of the two just named. The flowers are produced in large panicles, numerously, and each blossom two inches long, of a rich deep-rose colour, beautifully spotted with crimson. Plants may now be obtained at some of the nursery establishments, and it merits a place in every collection of hot-house plants. (Figured in *Paxton's Flower Garden*, No. 76.)

HAKEA MYRTOIDES. MYRTLE-LIKE. Proteacæa.—A shrubby plant, growing two feet high, from the Swan River settlement. The leaves are very similar to those of the Acacia armata. The bright red and yellow flowers (so unusual in this genus), nestled among the pretty leaves, produce a very pretty effect. Each flower is about half an inch long. It blooms in winter in the greenhouse, and merits a place in every one. (Figured in *Bot. Mag.*, 4643.)

LINARIA RETICULATA. (Synonym, Antirrhinum reticulatum.)—This very pretty-flowering Toad-flax is a hardy herbaceous perennial plant, a native of Portugal and Algeria. It blooms very freely during summer, and readily increases by cuttings. The flowers are very handsome, variable in colour, from blue, rose, and purple-veined, to deep purple; the inside of the throat whitish, sometimes yellow. Each blossom is an inch long. Mr. Stark, of Edinburgh, possesses the plant. (Figured in *Magazine of Botany.*)

LUZURIAGA RADICANS. Liliaceæ.—A native of South Chili, where it grows in cool shady woods, covering the trunks of trees, and bears pendulous blossoms, white, something like snowdrops, and which are very fragrant.

MACHÆRANTHERA TANACETIFOLIA. TANSY-LEAVED. (Synonym, Aster tanacetifolia, A. chrysanthemoides.)—Introduced to the Royal Gardens of Kew from New Mexico. It is a handsome, half-hardy, half-shrubby plant. It grows about a foot high, branching, and the flowers are nearly as those of the China Aster. They are produced in terminal heads, yellow, with a purple ray. It flourishes in the open ground in summer, but requires to be in the greenhouse or pit-frame in winter. It increases freely by cuttings.

Sisyrinchium majale. (Synonym, S. graminifolium, var. pumilum.)—A dwarf, half-hardy perennial from Chili, with rough grassy leaves, growing from six to eighteen inches high. Sepals and petals bright yellow, with a deep brown spot at the base of each. Each flower is nearly an inch across, very pretty, and blooming in terminal heads in succession, for a long time, renders it valuable.

Strobilanthus auriculatus. Acanthaceæ.—A native of the East Indies, and is a fine winter, and early spring blooming, hothouse, soft-wooded plant. It grows two to three feet high, branching. The flowers are produced numerously, on short axillary branches, each having from ten to twenty blossoms. They are bell-shaped, nearly an inch long, pale blue, prettily veined. It is of the same habit as the Ruellia. The genus Strobilanthus was formed from the Ruellia; the R. Sabiniana being named S. Sabiniana.

Stylidium armeria.—The leaves are grassy-like, about a quarter of an inch broad. The flowers are produced in long erect racemes, forming a cone of eight to ten inches long. Each blossom is three parts of an inch across, broadish petals, of a handsome purplish-crimson colour. It is a native of Van Diemen's Land, a herbaceous perennial, deserving a place in every greenhouse. This genus thrives best in a compost of equal parts of light loam, peat, and leaf-mould, to which a sprinkling of sand and bits of charcoal should be added. (Figured in *Magazine of Botany.*)

Plants now in Bloom at Kew.

In the Greenhouse.

A considerable number of the Pea-flowered (Leguminose) tribe of plants are now in beautiful bloom, the best of which are the following:—

Loddigesia oxalidifolia. Oxalis-leaved.—It forms a dwarf, branching, bushy plant, with neat foliage, and pretty, smallish, pink-coloured flowers, borne in profusion.

Chorozema scandens.—A climbing plant, with neat glaucous leaves. The flowers are of a bright yellow, with a red keel, which has the appearance of a red eye. This plant is trained to a wire frame, and, blooming so freely, has a beautiful effect.

Lalage ornata.—Oval leaves, medium sized. Flowers yellow, with dark claws and keel; profuse bloomer.

Hovea illicifolia.—A very neat plant, with holly-like foliage. The flowers are a bright blue, with a deep violet keel. Very handsome.

Goodia pubescens.—Foliage Laburnum-like, but small. Flowers yellow, with a dark centre, and in profusion. Very beautiful.

Pultenæa sub-umbellata.—Very neat, narrow, myrtle-like foliage. The flowers are produced in fine heads, a golden-yellow in front, and streaked with crimson behind. A profuse bloomer.

CHOROZEMA MACROPHYLLUM.—Leaves large. Flowers orange colour, with a rosy-pink keel. Neat and pretty.

PULTENÆA GLAUCA.—Narrow leaves. Flowers almost like those of a scarlet kidney bean, of a deep red colour, and the plant almost covered with them.

BOSSIÆA CORDIFOLIA.—Small neat foliage, and a neat bushy plant. Flowers light yellow, in profusion.

HOVEA FERRUGINEA.—An erect-growing plant; leaves brown underneath. Flowers of a bluish lilac; neat and pretty.

PODOLOBIUM STAUROPHYLLUM.—Small holly-like leaves. Flowers a rich yellow, with a red keel, borne in profusion. Very handsome.

GASTROLOBIUM CUNEATUM.—A neat bushy plant, with small leaves. Flowers yellow, with a dark crimson keel, in profusion. Very pretty.

BOSSIÆA ELEGANS.—A neat, narrow-leaved, bushy plant. Flowers yellow, with a maroon crimson outside; each nearly an inch across. Very handsome.

BRACHYSEMA LATIFOLIA.—With its scarlet, kidney-bean-like, deep red flowers, in profuse bloom, trained to a high, pyramidal, wire frame. Very pretty.

AOTUS GRACILLIMUS.—An upright neat plant, with small foliage, and literally overladen with long spikes of its immense number of deep yellow and crimson blossoms. Very handsome, and, by cutting back the plant after it has done blooming, it is readily kept a dwarf plant.

BORONIA TETRANDREA.—A very neat bushy plant, with pretty pinnate foliage. The flowers are produced in profusion. Each blossom half an inch across, of a pretty pink colour. A charming plant, which ought to be in every greenhouse.

APHELEXIS PURPUREA-MACRANTHA.—A plant, two feet and a-half high, and three across, had upwards of two hundred flowers; each of which is large, of a dark crimson-purple. It is the finest of the genus we have seen.

A. HUMILIS.—Flowers of a bright rosy crimson. It is a dwarfish plant, blooming freely. Very pretty.

A. SPECTABILIS.—Of medium-sized habit, blooming very freely. The flowers of largish size, and of maroon-crimson, tinged with rose. Very neat and pretty.

CLEMATIS GLYCINIOIDES.—A climber, ten feet long, blooming profusely in large panicles. Each flower an inch across, white. Very pretty.

C. ARISTATA.—A climber, twelve feet long, in profuse bloom. Each blossom has from five to ten petals, pure white, and the flower is nearly three inches across. It is remarkably showy and handsome, appearing like a sheet of snow.

SALVIA GESNERIFLORA.—With its large heads of rich scarlet flowers, are exceedingly showy.

ZIERII MACROPHYLLA.—A neat bushy plant, with lance-shaped leaves. The flowers are like small heads of Lauristinus, pure white, and are in profusion. Very pretty.

EPACRIS VARIABILIS RUBRA.—Wide bell-shaped, half an inch long; a bright rosy red.

E. FORMOSA.—Bell-shaped, half an inch long; peach coloured.

E. CARNEA LONGIFLORA.—Nearly an inch long, bell-shaped; bright pink colour; profuse bloomer. Very handsome.

E. CAMPANULATA CARNEA.—Flesh colour, bell-shaped, half an inch long. Very pretty.

E. FAIRBAIRNI.—Bell-shaped, half an inch long; deep pink. Very pretty.

E. VARIABILIS GRANDIFLORA.—Bell-shaped, half an inch long; bright pink. Very pretty.

E. IMPRESSA ALBA SUPERBA.—Bell-shaped, half an inch long; pure white. Very handsome.

E. OCHROLEUCA.—Bell-shaped, half an inch long; cream coloured. Pretty.

E. DENSIFLORA.—Bell-shaped; tube below pink, the upper part white. Very pretty.

E. COCCINEA.—Tube one inch long; a bright rosy scarlet. Very pretty.

E. CAMPANULATA BLANDA. Very wide bell-shaped, one third of an inch long; white. Very pretty.

E. WILMOREANA.—Tube nearly one inch long; rosy red, with a white end. Pretty.

E. ALBA-PENDULÆFLORA.—Wide bell-shaped, half an inch long; the flowers are in a drooping position down the sides of the shoots. Very pretty.

Thirteen of these are new varieties, exceedingly beautiful, and deserve a place in every greenhouse. They are profuse bloomers, grow freely, and are a valuable addition to this charming tribe; each being very distinct from any other.

GLORIOSA PLANTII.—Mr. Plant sent this charming species from Natal. The plant grows erect, like some of the Alstræmerias, three feet high. The first whorl of flowers is produced about a foot from the ground, and the second and third about a foot higher, at similar distances. The curious curled flowers are more scarlet than the G. superba, which many of our readers have seen. It merits a place in every stove.

KING OF THE FUCHSIAS (Meillez).—The flower is an enormous size. Tube orange, tinged with pink; sepals rose, with green tips; corolla orange and rose. Said to be much superior to any other Fuchsia.

MADAME LEMICHEZ (Meillez).—Flower very long; calyx rosy-lilac, with green tips; corolla a blue-lilac. Very beautiful.

LOUISA LELANDAIS (Meillez).—Flower very large; calyx pale orange, with light tips; corolla deep orange. Very fine.

HELIOTROPIUM, LOUIS NAPOLEON.—The plant vigorous, and the flowers are produced in enormous large umbels. It is the deepest coloured existing. Very fine.

H. PICCIOLA.—A handsome dwarf plant, with large umbels of flowers; white, edged with blue. Very distinct.

H. PERFECTION.—A vigorous plant, having very small leaves, with enormous heads of white flowers. Very fine.

Pentstemon atro-cæruleus.—An hybrid from the true P. gentianoides; vigorous grower; flowers very large, of a fine blue, with the mouth striped. Very superb.

P. grandis.—Another hybrid, from the same as the last, and the flower as long, of a violet-blue, streaked with white and carmine. Very beautiful.

Verbena M. Affree (Meillez).—Flower very large, deep purple, with a large golden-yellow eye. A superb variety.

V. Marie Stuard.—Large flower; white tinged with flesh, centre rose, with an amaranth eye. Very fine.

V. Madame Meillez.—Flower enormous size; bright rose, with a rich scarlet centre. Superb.

Hydrangea hortensis fol. variegatis.—The leaves are green, with a broad edging of pure white. Exceedingly handsome.

Dodecatheon media alba compacta.—A very superb dwarf variety, bearing an enormous umbel of large flowers; white, with a yellow margin.

Tigridia canariensis.—The flowers are a bright yellow, most beautifully spotted with rich crimson. A charming acquisition.

Balsamina latifolia alba.—In its appearance like the well-known B. latifolia, which has rosy-lilac flowers, the present variety has white ones. A charming companion to the species, worth a place in every stove or greenhouse.

Dillwynia scabra.—This is another beautiful, pea-formed, flowering, dwarf shrub from Australia. It blooms profusely; the flowers being in clusters along the shoots for several inches; they are of a brilliant scarlet, with a yellowish margin. Very handsome, and ought to be in every greenhouse.

In Mr. Van Houtte's Establishment.

Chirita sinensis variegata.—The leaves have pure white veins. Very pretty.

Gesneria Leopoldii.—The handsomest of the genus. The flowers are large, in long spikes, of a rich scarlet crimson.

Gesneria zebrina splendens.—The flowers are more rich and brilliant, and the spotting deeper, and the velvet stripes of the leaves are more distant than the original species.

Sphæralcea nutans.—Of the Abutilon tribe; the flowers are rose coloured, drooping, and very beautiful. These flowers are charming for a hand bouquet, mingled with others.

Ardisia crenulata fructu albo.—This is a very charming variety, having white fruit, and will form a striking contrast with the red-berried.

Lapageria alba.—We figured the L. rosea in a recent volume, one of the most beautiful of flowers; the present one, it appears, has white ones. It is a very valuable acquisition. Its price is put down by Mr. Van Houtte at 300 francs.

HYDRANGEA JAPONICA, FOL. VARIEGATA.—This is a handsome variety, having variegated leaves of white and green.

MYRTUS COMMUNIS FLORA PLENA RUBRA.—A most charming double-blossomed Myrtle, having red flowers, and a handsome silver-edged-leaved Wallflower, have been obtained by Mr. Schnicke, in Prussia.

CHEIRANTHUS CHEIRI FL. PL. FOLIA ARGENTEA VARIEGATA.—A new variety of the Double Wallflower, raised by Mr. Schnieke, in Prussia; its leaves are bright green, edged with pure white. It is a decided acquisition to this much-loved flower.

PROPAGATION OF EPACRISES.

BY A LONDON NURSERY PROPAGATOR.

THIS charming tribe of greenhouse plants has had, within the last five years, the particular attention of hybridizers, and many most beautiful improvements have been raised; especially so in the hyacinth-like flowered and the bell-shaped. We now possess varieties from the purest snow white to the brightest scarlet and crimson. The habit of the plants, too, is improved, being dwarfer; and even with all, by stopping the leads, bushy plants are readily formed. The profuse flowering, too, is a great improvement, and by proper treatment, a succession of bloom with all the kinds may be had the entire year. The culture of them, too, is very easy; care being taken not to sodden them with water, nor must they be allowed to flag for want of water. Avoiding these particulars, giving them a free air, and a good sandy peat, well drained, they will flourish and bloom admirably.

Their increase from cuttings has been often said to be difficult. I have raised thousands by cuttings, and not more than one in fifty fails. Plants may be purchased very cheap, but amateurs who are desirous of increasing any particular kind may succeed to satisfaction by adopting the following method. The young shoots, about half ripened, must be those taken, and from an inch to two inches they must be shortened in preparing them for insertion in the cutting pot. Take a clean 48-sized pot, put a large crock in the bottom, then add a quantity of small crocks, or coarse cinders, until the pot is half full; upon this put a layer of moss beat down firm; fill up with fine sifted peat mould and white silver sand, an equal quantity mixed together, pressing it down firm to within a quarter of an inch of the rim of the pot; fill up with clean-sifted silver sand, passing a stick over the pot to make the surface level; give a slight watering with a fine rose pot or syringe; take a bell-glass, press it lightly on the sand so as to leave the circumference; then select your cuttings from last year's ripened wood. Cut the tops of the shoots about one inch long, strip the cutting half its length of leaves; lay it on your thumb-nail; with a sharp knife cut the base at a joint quite smooth, and when a sufficient quantity to fill the pot is prepared, insert the cuttings as far as stripped, keeping the tallest, if any, in the centre. Give a good watering to settle the sand about them; let them stand until dry; cover with the bell-glass, and plunge the pot in a cold frame facing north; keep the light on, protecting from frost with covering, or, for want of a frame, place the pot on a north shelf in the greenhouse, but by no means in the sun; wipe the glass once a day; water according to judgment, keeping them rather dry than moist. When the cuttings begin to grow, take the glass off occasionally for half an hour, and increase with air as the cuttings increase in growth, until it may be left off altogether; then remove them to the greenhouse. Pot them off the following March into thumb-pots, well drained, using peat mould and sand in equal quantities; place them in a cold frame until rooted. During summer, top any long shoot, and by the autumn you will have snug bushy plants, producing in spring beautiful pendant blossoms.

PROPAGATING CAMPANULA PYRAMIDALIS.

BY A LONDON AMATEUR CULTIVATOR.

Seeing an account in your Cabinet on the cultivation of Campanula pyramidalis, which advises slips to be taken off in the month of April, and having most successfully cultivated these plants for several years by a far different method, I thought I would trouble you with a few remarks on the method I pursue. As soon as the plants have done blooming, I immediately turn them out of their pots; the root I then break into as many pieces as I want plants, and put five or six of the pieces into a 48-sized pot, which is half-filled with mould, then put in the pieces, and afterwards fill the pot with the mould. Having the convenience of a frame, or hand-light, after watering, I place it over them. In the spring (about March), I pot them singly, and so let them remain during the summer in any cool part of the garden, where they grow vigorously. On the following spring, I pot them into 24-sized pots, and place them in the greenhouse, where they remain till they have done blooming. Last season I cut a white one up this way, and I now have thirty-six strong healthy plants for bloom the coming summer. I beg to observe, that if some of the largest pieces of the roots are selected, and placed upon any slight heat, they will bloom finely the following spring, the plants making their appearance through the mould in two or three weeks. They may be increased in the way I have been mentioning, entirely in the open air, and when strong enough for bloom be brought into the apartment of a house. When a plant of the blue-flowered has extended its spike, and before the flowers open, I have placed one or more in an entrance-hall, as well as sitting-room, where the plant has light, but not the sun shining upon it; and in this partial shade the flowers become a most beautiful French lilac, far prettier than the blue or white flowers. In the sitting-room, which has an east aspect, I have the plant placed at the opposite side from the windows, which is the most shady place in the room. I have grown them eight feet high in these situations, and no flowering plant is more elegant, as well as being powerfully fragrant.

DWARF FLOWERING PLANTS OF THE BRUGMANSIA SUAVEOLENS.

BY MR. JAMES M'AULAY, BREVITREE, CUMBERLAND.

As late in the spring as possible, before the buds are moving, I select a strong shoot well furnished with buds; cut the shoot into as many divisions as there are buds, and insert each bud into a large 60-pot, just covering the eye with mould; plunging the pot into a hot-bed of moderate heat, being careful of too much steam. When the plants appear, I give a little water, but at first moderately, or the cuttings will rot; when the plants are well rooted, I remove them into a colder frame, and by degrees harden them off. About the latter end of May, or beginning of June, I turn them carefully out of the pits into the open ground, where the soil is not too rich; water them occasionally, but not too often. About the beginning of September they will show for bloom: as soon as this is perceived, they are taken up carefully, with as much mould as possible, potted into pots suitable to their roots, and set in a cold frame, keeping them close until recovered from being potted, and they flower freely, forming a striking object for the greenhouse, the plants being quite dwarf, about a yard high, and bearing numerous fine-sized flowers.

DISSECTING LEAVES.

BY SOPHIA, OF ST. JOHN'S WOOD, REGENT'S PARK, LONDON.

I RECENTLY saw a number of most strikingly interesting and perfect specimens of dissected leaves, of various kinds, in the Museum at Kew Gardens, and it reminded me of a promise I had made some time ago, to send some particulars relative to the process I have very successfully practised in dissecting leaves, calyxes, and capsules of flowers, &c. The following is the method pursued:—

Cherries, Pear, Poplar, Ivy, Holly, or Maple leaves, &c., to be gathered in June or July, when the young leaves are at their full growth; put them in an earthen pan, full of rain-water; as it wastes fill it up, but do not empty out any of the water. Some of the leaves will be ready to dissect in a month, and some not in less than two. When the external membranes begin to separate, then is the time to begin the operation. The leaf must be put in a flat white plate, with clean water; squeeze the leaf gently with the finger and it will open on one side, the green juice will press out; then the two outward skins must be stripped off, first in the middle and along the sides, where they closely adhere, and if an opening is made they will easily come off: then wash the skeleton in clean water, and put it between the leaves of a book to dry. Pear and Holly have a double set of fibres, that must be separated with circumspection; one set of fibres is more perfect than the other. I must observe that I was not able to procure rain-water for the greater part of the leaves I have dissected, and that I succeeded without. Box leaves I found to require to remain several months in the water. Some leaves of the Spanish Chesnut I once had for more than a year in water, and then was obliged to throw them away unchanged: I have not since been able to try them again. I have now a query to propose. I have succeeded perfectly in dissecting the leaves and the floral leaves of the Lime-tree, but the skeleton of the Lime-tree leaves remains green, and no washing will bleach it. Perhaps some reader of the CABINET will have the kindness to inform me how to bleach them, without injuring the fibre of the skeleton. The above is a dirty, and not a very sweet job, but the admirable beauty of the skeletons, in my opinion, fully compensates for the trouble.

TIGRIDIAS.

BY A LONDON SEEDSMAN.

SOME one lately requested information relative to the management of these beautiful flowering plants. I beg leave to state, that the only difficulty attending the culture of this plant is, its bulbs not being sufficiently ripe when taken up in the autumn. By this means they are apt to rot; but if, with great care, they are preserved till spring, they become so exhausted by the means used to keep them that, when planted, the flowers, if any are produced, are extremely weak. To remedy this, plant them in a light soil and warm situation, being careful never to put them deep enough in the ground as to cover the crown; if this be attended to, and they are taken up as soon as the tops decay in autumn, before they are saturated with wet, and retain all the soil to the bulbs possible, placing them where they will be preserved dry, and from frost, through winter, and they will keep sound and bloom vigorously each successive season.

TREATMENT OF GREENHOUSE PLANTS DURING WINTER.

BY AN ATTENTIVE OBSERVER.

I HAVE long been surprised that there has not been anything communicated to your readers on this subject, particularly when there has long existed so much mismanagement, and the consequent loss of plants during the period stated above. Conscious of the necessity of some improvement, I have drawn up the following particulars, which I trust may be of service where required, and beg their insertion.

The stock of such plants is usually placed out-doors in summer, and the great objects to be obtained are, bushy, uniform plants, having the shoots of the present season well ripened, or hardened, as some people say. This necessary advantage should be realized by the middle of September at latest. About the last week in August, the pots, if they have been plunged in ashes, or other material, where the roots have pushed into, should be taken up, and all such be cut away, and the pots be replaced. This pruning will not injure the plant, and no apparent check will be sustained, and it prepares the plants for removal into the greenhouse by the middle of September. In placing them a gradual descent must be maintained, to allow showy plants to be conspicuous, thus preventing a monotonous appearance. On being *first* brought in, do not have the plants close together, or the tender leaves will be likely to turn yellow and fall off; after a time they may be put closer with safety. In every collection, plants of the same species and habit should be, as far as is practicable, kept together; many of them, as Ericas, &c., do not succeed well when mixed with other plants, especially large-leaved ones. Some plants, too, require airy situations, others the contrary; these essential particulars should be duly attended to. Cape plants particularly delight in an airy place, the *habit* of every plant should be accommodated. It only requires attention at the first arrangement, and being secured after destruction is prevented.

When they are all housed, and dirt of every description taken away, let as much free air be given as possible in the day-time; and even at night, should the weather prove moderately mild, and free from any appearance of frost. In fact, I have seldom seen frosts at this early season so severe, as to injure any greenhouse plants, that were not immediately exposed to its perpendicular effect: therefore the front windows may be kept open continually, unless there is a prospect of its being particularly severe, or accompanied with cold driving winds, in which case it will be necessary to keep them pretty close.

If air is too sparingly admitted at this season, when many of the plants have not yet finished their summer's growth, it will inevitably cause them to produce weak and tender shoots; which will be extremely liable to damp off at a more advanced season, when the house must be unavoidably kept close on account of the severities of the external air; and besides, it will tend to give them a more general tender habit, and render them less able to resist the winter colds than they otherwise would. Hence it is evident, that they cannot receive too much air, whenever the state of the external air will admit of it, by being free from all appearance of frost; as it will be so much to their advantage to be thus hardened, before the winter assumes its severest front.

This is a practice I would strenuously recommend to all cultivators of exotics, to be observed the whole period they remain in the house, their own observations on the state of the weather being their constant guide.

Water should also be plentifully administered when they are first taken into the house, as the dry board, on which they now stand, as well as the elevated situation, and free circulating air, occasions them to require more than when they stood on the moist earth; however, by no means go to the extreme, giving it only when evidently necessary.

It is a common, but, in my opinion, a very erroneous practice, to place pans under the pots indiscriminately, and by many they are regularly filled with water twice or thrice a-week, or perhaps every day, whether the plants may want it or not; and this they are pleased to term a saving of labour; and it eventually becomes so in fact; for they have seldom so much care and trouble on their hands, in the spring, many of the most curious plants being killed by this treatment; for, although it may not perceptibly injure the coarser kinds, its pernicious effects on the tenderer sorts must be evident to the commonest observer; as the earth in the bottom of the pot, by being constantly in the water, becomes coagulated, and sour, and is consequently liable to rot the young fibres, by which the plants in general contract a languid and sickly habit.

As the close foggy weather advances, water must be given more sparingly, else it will conspire with the atmosphere to increase the damps of the house; which will inevitably injure the plants by rotting their leaves. These, and dead flowers, should be picked off as soon as they are observable; otherwise they will make a very disagreeable appearance.

Early in November all the tenderer Cape bulbs are usually planted; viz., Ixia, Iris, Moræa, Gladiolus, Antholyza, Galaxia, Oxalis, Lachenalia, Ornithogallum, &c., as they generally commence vegetation about this time, and they supply a most beautiful variety of flowers for the ensuing spring and summer.

When growing they should be kept pretty moist, particularly the stronger species; otherwise they will not flower freely, and such as do will not be so fine: however, when they have done flowering, and the grass indicates an end to vegetation for the season, they should be gradually dried; and when perfectly so, either set in the pots in a dry sheltered place, or otherwise taken out of them, and put in separate paper bags, in sorts, until the autumn: I prefer the latter process; it is necessary to keep them in sorts, otherwise the strong, which are not always the finest kinds, would smother the delicate ones, that in many instances produce the most brilliant, and frequently odoriferous flowers.

The months of November and December seem to be more noxious to the health of plants, than any other season; by reason of their being full of sappy leaves, and the remains of many of the autumn flowers being still on them, when the weather (which at this time generally becomes close and chilly), renders it necessary to keep the house shut, and warm; this occasions a most pernicious damp to exhale from every part of the house, and even from the earth in the pots; which fixes on the leaves and other parts of the plants to their inevitable injury, particularly the younger parts, such as were the produce of the preceding summer. If this kind of weather continues for any considerable time, it will be advisable to give a little fire heat, to help in drying up these baneful exhalations, and also as much air as can be safely admitted by the doors and front windows, more especially when fire is added; otherwise the heat of the flues will, instead of expelling the contaminated air, rather occasion it to exhale more freely, and be of worse consequences.

At this season also, the plants should be regularly examined to clear them of all dirt, and also to scrape off any moss, &c., that may have grown on the surface of the mould, and to renew it with a little fresh loam. This contributes much to their good appearance, if neatly executed.

Very little fire heat seems to be requisite to the preservation of greenhouse plants in this climate; in fact, the less it is found necessary to use the better. I have never practised it (except in the case of damps, as before mentioned), until I perceived the frost so severe, as to lower the spirit in the thermometer several degrees below the temperate point, and then merely sufficient to raise it again to the above-mentioned point. If this can be done without the assistance of fire, so much the better, for which purpose bass mats must be used along the lower parts of the house, where they can be conveniently fastened; these will be of infinite service even when fire is used, as less of that element will suffice; but they should be always taken off in the day to admit the light, unless the weather happens to be particularly severe.

Sometimes in the depth of winter there is a succession of very clear weather for several days together, wherein warm sunny days succeed the coldest frost, and nights in which fires have been absolutely necessary; in this case it will be requisite to give all the air possible in the day (unless strong harsh winds, or other occasional preventatives happen to prevail), observing, to shut the windows up close early in the afternoon, so as to include part of the natural heat of the atmosphere within the house. Such weather renders an increase of water necessary, especially over the entrance of the flues, where the fires have the greatest force. It should be administered in the morning, and ought to be kept in the house all night to expel any frosty particles it may have imbibed, and render it nearly equal to the temperature of the air of the house.

MISCELLANEOUS SECTION.

HORTICULTURAL SOCIETY, *March* 16.—Among subjects of exhibition, Mr. Meredith, gardener to the Duke of Sutherland, at Cleifden, sent some admirable specimens of Begonia manicata, and a hybrid raised between that sort and hydrocotylifolia. It had the general aspect of hydrocotylifolia, but added the constitutional vigour and some other peculiarities belonging to manicata; while altogether it was a more desirable plant than either of its parents. A Banksian medal was awarded it. The same exhibitor also furnished a bouquet, with a view to illustrate a good mode of packing such things for travelling. Two parallel lines of string, about an inch apart, were fastened between the four opposite sides of a square wooden box, so as to intersect each other in the middle, but at different levels. The shank of the bouquet was then passed down where the lines intersect, embedded up to the flowers in damp moss, and tied firmly to the bottom of the box. In this way the bouquet is kept fast in one position, and travels safely. We must add that the interest of such exhibitions as this would be greatly enhanced if they were accompanied by written explanatory memoranda. We think, indeed, that in the absence of such memoranda they should not receive prizes. Messrs. Henderson, of Pine-apple-place, sent Epacris hyacinthiflora candidissima; a curious little deep yellow-flowered Acacia called squamata, with needle-like processes in the place of leaves; four plants of the Cape Lachenalia luteola; and a good specimen of Dielytra spectabilis, whose flowers were, however, somewhat deficient in colour, owing to their having been produced in too much heat. A certificate of merit was awarded it.—Messrs. Jackson, of Kingston, sent two seedling Camellias, named Duchess of Buccleuch and Martinii. The latter is a promising deep crimson-flowered kind, with a white stripe down the centre of each petal.—From Ealing-park, Mrs. Lawrence sent a fine example of the Hong Kong Enkianthus reticulatus, the charming Boronia triphylla, covered with pink starry flowers, the white Eriostemon scabrum, Styphelia tubiflora, Lycaste Skinneri, the long-tailed Lady's Slipper (Cypripedium caudatum), and cut flower spikes of Amherstia nobilis. It was mentioned that at Ealing-park, the Amherstia is now as large as a good-sized apple-tree; that it has been in flower ever since Christmas; that nearly one hundred and seventy spikes of lovely inflorescence have been cut from it; and that about as many more yet remain on the tree. A certificate of merit was awarded for the Cypripedium, and a Banksian medal for the stove and greenhouse plants.—An example of the Sikkim Rhododendron ciliatum, of which a good specimen was shown at the last meeting, by Messrs. Standish and Noble, was furnished by Sir Joseph Paxton, from Chatsworth. On this occasion it was as colourless as the white Indian Azalea; but whether this was constitutional, or merely the effect of circumstances, could not in the present instance be clearly determined upon.—Mr. Ingram, gardener to Her Majesty, at Frogmore, sent a pretty Epacris, a seedling from miniata, and a Cayenne Pine-apple, weighing 7 lbs. 2 ozs. A Banksian medal was awarded for the latter.—From Mr. Tillery, gardener to the Duke of Portland, at Welbeck, came ripe fruits of the Japan Medlar (Eriobotrya japonica), for which a certificate of merit was awarded. They were the produce of a tree which fills an entire house at Welbeck, and from which three or four dishes were stated to have been gathered weekly for these last six weeks, and a considerable quantity is said still to remain on the tree. They are much esteemed at Welbeck for dessert.—From the Society's garden came a pretty pink Azalea, sent from China, by Mr. Fortune; Rhododendron nilagiricum, an exceedingly handsome bright rose-coloured kind; Forsythia viridissima; the New Holland Dendrobium Kingianum; the little green-flowered Clematis pedicellata: and some other plants.

SIKKIM RHODODENDRONS.—From a remark in the *Gardener's Chronicle*, it appears that the fact of most of the Sikkim Rhododendrons having, though unprotected, thriven in the open air throughout last winter is not generally known. Small plants of all the species were planted out, late in autumn, among the Rhododendron clumps on either hand of the main walk at Kew. Not one of these has been killed; all, with few exceptions, are at this moment healthy, and many have flourished. There are the following:—R. argenteum, from 6 to 7,000 feet; and R. Campbelliæ, from 8 to 10,000 feet, both very strong and luxuriant; R. barbatum, 8,000 feet; and R. campanulatum, 11,000 feet, several plants of each strong and healthy; R. ciliatum, 10,000 feet, several specimens in the same state, two or three have well-formed flower-buds, and will probably blossom in a week or two; R. lepidotum, 12 to 14,000 feet, a little of, much stronger and healthier than the plants in the greenhouse; R. argenteum, 8,000 feet, a few robust specimens; R. glaucum, 11,000 feet, many particularly healthy young plants; R. campylocarpum, cinnabarinum, and Thomsoni, all from 10 to 12,000 feet, several plants (a dozen or so) of each, and all strong and healthy; R. Dalhousiæ, 7,000 feet, a few plants, not vigorous or promising; R. Falconerii, 10,000 feet; Aucklandii, 6 to 7,000 feet; and lanatum, 10,000 feet, one or two fair specimens of each. The above have had no protection but such as the surrounding low Rhododendron bushes have afforded; and upon the whole they appear to have suffered less from shrivelling of the ends of the leaves, than those in the conservatory have. The trying season has, however, but now commenced, and I have little expectation of many of them surviving the spring, without much shade and moisture. The soil at Kew, even in these made beds, is light and dry; the roots of the young plants do not strike deep, and I felt the leaves of several to be quite warm under the sun of last Monday, clearly indicating a checked circulation. In their native localities, at this early state of growth, young plants have a very wet, cool subsoil in the spring months, so that though the sun's rays be more powerful than in England, they are provided by an abundance of humidity at the root, against any injury that would arise from a suddenly increased circulation. Most of these species again, being natives of 8 to 12,000 feet, experience a very much colder winter than that of England is; they are consequently kept in too excited a state here, and the spring frosts of April are all the more to be dreaded. In the Himalaya, the first great increase of temperature occurs in March, which is 8 degrees warmer than February; this brings forward the Himalayan plants, which are not exposed afterwards to night frosts. In England, an equivalent increment of temperature does not occur till May; but our winters are so mild, that the cultivated Himalayan plants are as forward in April in England as they are in their native country, and consequently suffer extremely from our night frosts. In the conservatory, three plants of R. ciliatum remain in flower; these flowers are very much larger than I ever saw them in the Himalaya (several blossoms are 3 inches diameter !), but nearly white, probably from the difference between the amount and intensity of solar light at 10,000 feet in May, of lat. 27°, and at the level of the sea in March, of lat. 52°. I have been just shown a magnificent head of R. arboreum, in flower, from Mr. Barclay, of Bury Hill, who informs me that the plant is a dwarf low shrub raised from Kemaon seeds, and grown without any protection.—*J. D. Hooker.*

TROPÆOLUM LOBBIANUM.—I am glad to see this handsome species of a beautiful genus brought under notice. I consider that wherever there is room for its cultivation it ought never to be neglected on account of its superabundance of charming flowers and great superiority over many of our climbers at this period of the year. It, however, wants rather more room than can be given it on a trellis in a pot. There is a plant of it at Raby Castle growing against a trellis on a back wall, covering a space of 30 feet long by 12 feet high, and it has been in bloom ever since November last, producing thousands, aye, tens of thousands of bright orange-scarlet flowers. It has been a perfect gem, and now that we have got more sun and length of day, it is growing vigorously, and there are thousands of blossoms on it yet to come out. It is growing in a border, composed of strong hazel loam, mushroom-bed dung, and charcoal well incorporated together, and turned in as rough as possible. It is watered occasionally with diluted soot or dung water, in the proportion of a quart to a 4-gallon can. I think it would make a beautiful rafter plant in a conservatory, it festoons so beautifully. The only drawback would be its old leaves turning yellow, and also the decayed flowers. I find that cuttings of it may be struck at any period of the year in ordinary soil in bottom heat.—*J. F. Roberts*, *Raby Gardens*, *Durham*, *March* 17.

COMPOST FOR PELARGONIUMS.—Visitors to the Grand Floral Shows at Chiswick, Regent's Park, and Surrey Gardens, have often admired the splendid specimens of Pelargoniums, exhibited by Mr. Beck, under the management of Mr. Dobson. They were grown in the following compost, viz., the top spit *full of fibre* from a meadow, mixed with one-third green stable dung thoroughly incorporated and laid up in a heap for about two years, and well chopped over during winter. When ready for use he says, before potting, " mix up with the loam four shovels of rotten cow-dung, the older the better, to one barrowful of mould; to this add an 8-inch potful of silver sand." Such is the kind of material in which such profuse blooming specimens are grown.

BEST TULIPS IN EACH CLASS.—Mr. Willison, nurseryman, &c., of Whitby, recently applied to all the celebrated Tulip growers in this country for each one to favour him with the names of what they considered the best six varieties of Tulips in each class, viz., Bizarres, Byblœmens, and Roses. He obtained lists from eight individuals, and, with his own list, he gives the result in the *Midland Florist* for April. The whole of the lists contained forty Roses, forty Bizarres; and forty-seven Byblœmens. The eight best in each class, as selected, are:—

Rose Tulips.—Aglai, 6 (in six lists out of the nine given); Heroine, 5; Triomphe Royale, 5; Catalina, 3; Bijou, 3; Princess Maud, 3; Claudiana, 3; La Vandicken, 3.

Bizarre Tulips.—Polyphemus (Lawrence's); Duke of Devonshire, 6'; Charles X., 6; Pilot, 5; Surpass Catafalque, 4; Polyphemus (Brown's), 3; Charbonnier Noir, 3; Magnum Bonum (or Sir Sidney Smith), 3.

Byblœmen Tulips.—Salvator Rosa, 7; Princess Royal, 6; Maid of Orleans, 4; Thalia, 4; Violet Alexander, 3; Maid of Athens, 2; Sable Monarch, 2; Queen Charlotte, 2; Violet Brun, 2; Pandora, 2.

The lists will be a useful guide to persons beginning to cultivate this beautiful tribe of flowers. The above varieties may be fully depended upon as of first-rate excellence for exhibiting. There are other very superb varieties, but, being new, and only in the hands of one or two individuals; are not included in the lists given. Those given above may be generally had, and at reasonable prices, of the general growers.

FLORAL OPERATIONS FOR THE MONTH

THE pits and greenhouses now offer the parterre their winter-stored plants, which are already commencing their growth, and are eager to breathe the pure air. Caution must, however, be exercised in being prepared for occasional frosts, with some protection at nights in case of need. If your plans are not yet fully arranged, as to bedding out, &c., lose no time; particular attention should be paid with contrasting the colours to give a good effect. A flower-garden may be richly furnished with plants, but be very ineffective if the colours are badly arranged. For producing a brilliant effect in masses, reject parti-coloured flowers; only use pure and decided colours, such as scarlet, pure white, deep purple, bright yellow, &c.; those which are in close affinity kill each other. Take care not to mix plants which are of doubtful duration when in bloom with those of a more permanent character, remembering always that the beauty of a formal flower-garden depends upon its being in all its details a perfect work of art, in which no blemish should occur. There must be high keeping, symmetry, judicious arrangement of colours (traceable to fixed principles), or it will not form a satisfactory whole. This should be particularly attended to. Many persons plant their stock so thinly, that their beds are not covered till late in the season; we advise *thick planting* for speedy effect.

When annuals are required for late flowering they may yet be sown; and hardy annuals that have come up too numerously should be thinned out, so as to retain but enough to be vigorous. Tender annuals, raised in pots or frames, should be taken, with as much soil to the roots as possible, and after the middle of the month be planted out. After all planting is done, the next operations will be training and pegging down the plants; this is a most important process towards having well-furnished beds. Climbing plants will now require training from time to time, according to their growth.

FLORISTS' FLOWERS.—Amongst these we may class the *Antirrhinum;* many of the kinds now in cultivation are exceedingly pretty, and deserve to be grown. Now is the best time to plant them out. *Carnations* and *Picotees* are by this time in their blooming pots; and as they advance in growth, attention will be necessary to stick and tie them up neatly. Stir up the surface-soil of the pots, and add a dressing of mixed loam and well-decayed dung. *Cinerarias.*—As these go out of bloom cut down the stems, which will induce an abundance of shoots for increase, and turn them out into the open ground where they are partially shaded. *Dahlias.*—The *third week* in the month is as early as it is safe to commence planting out. The young plants will be greatly strengthened by repotting them into larger pots, giving all the favourable air possible, in order to have them hardy when turned out. *Fuchsias.*—Repot and trim all the plants required for specimens; encourage their growth by frequently syringing them over-head. *Pansies.*—Cuttings put in last month may now be planted in a shady bed, for summer blooming. A good watering in dry weather will be necessary. Such as are grown in pots, for show, require particular attention, and by thinning out the side shoots much finer blooms may be had. *Pinks.*—As the blooming stems advance they will require thinning out. The more robust and very double kinds should have two or three stems left. *Ranunculuses.*—If dry weather continues, water must be liberally supplied; apply it between the roots and not over the foliage, and use rain-water if possible, preferring evening for the operation. *Tulips.*—The top cloth should at once be got on, and never let the sun reach the flowers after they show colour, but give all the air possible.

IN THE FORCING-FRAME.—Continue to strike cuttings of stove and greenhouse plants, and pot off such as are struck. Plants intended to be flowering specimens for the greenhouse, such as Achimenes, Gloxinias, Gesnerias, &c., should be grown here, and brought forward as rapidly as practicable. What are termed greenhouse annuals, as Balsams, Cockscombs, Salpiglossis, Rhodanthe, Thunbergias, &c., should be got on quickly. A strong stimulating soil, copious waterings, and ample pot room, together with bottom heat, are inseparable necessaries to their successful cultivation.

IN THE GREENHOUSE, &c.—A free ventilation is of importance, and by closing with a humid atmosphere early in the evening a vigorous growth will be best promoted. Give liberal shifts to such plants as now require it before the roots become matted; much injury is often done by deferring until a general shifting. Camellias, such as have formed their flower buds, should be placed in a sheltered and shady situation out of doors. Ericas should have the ends of their shoots pinched off, to render them bushy and spreading. Climbing plants should be neatly tied as they advance in growth, and abundance of flowers will be the result. Shrubby plants of weak growth, and which naturally make *long frail shoots,* are much improved by bending down the branches, and fixing them to a wire attached to the rim of the pot; in this manner the nakedness of the plant at its base is hidden, and the check imposed on the ascent of sap will induce an increased supply of shoots.

Pelargoniums.—Never allow the plants to flag, or the bottom leaves will turn yellow, and the plants then become naked. Put cow, horse, and sheep dung in equal parts, with a sprinkling of quick lime into a tub, and to one peck of these add five gallons of rain or other soft water. When taking it for use draw it off clear, and give the plants a watering twice a-week. Give air freely, shut up early, and syringe the plants overhead three times a-week till the flowers expand. Fumigate to keep down green fly.

Calceolarias.—Keep the lower side shoots pegged down; it will induce roots to push up the stems. Fumigate occasionally to keep down the green-fly.

Azaleas.—When done blooming the growth must be promoted; see Articles upon culture.

Watering.—At this season increasing attention is requisite; care must be taken that the *entire ball* of soil is made moist, particularly with the plants grown in sandy peat or sandy loam; a few holes made by means of an iron pin down through the ball will admit water into its interior.

BRIEF REMARKS.

The Chrysanthemum.—Mr. George Taylor, of Stoke Newington, favoured us a year ago with an excellent article on the culture of this tribe of plants, it appeared in the volume for 1850. Since that time he has wrote a "Treatise on the Chrysanthemum," which may be had of any bookseller. Mr. Taylor is one of the best growers, and successful exhibitors. The following varieties he recommends to be grown for cut blooms, for exhibiting at the shows. The first nine are admirably adapted for growing against a wall:—

Aristides, red.
Beauty, blush and pink.
Campestroni, deep rosy-purple.
Clustered Yellow, golden yellow.
Duke, blush.
King, rose.
Princess Marie, rose.
Pio Nouo, Indian red.
Vesta, white.
Annie Salter, canary yellow.
Cyclops, straw, and brown back.
Christine, lilac.
Defiance, white.
Duchesse d'Abrantes, deep bright rose.
Dupont de l'Eure, purple and orange.
Formosum, creamy white.
Gem, white tipped with pink.
Goliath, white.
Lysias, bright cinnamon red.
Nonpareil, dark rosy pink.
Phidias, rose and white.
Rabelais, reddish carmine.
Rebecca, light rose.
Sydenham, light red crimson.
Queen of England, blush.
Two-Coloured Incurved, red and yellow.
The Warden, orange.

Six of the best Anemone or Aster flowering varieties, are—

Gluck, bright yellow.
Fleur de Marie, fine clear white.
Nancy de Sermet, white.
Madame Godereau, white.
Marguerite d'Anjou, nankeen.
Reine Marguerite, lilac blush.

Watering.—Every point in plant culture is of consequence, and must be diligently attended to with care and judgment. If one is ill or carelessly done, it renders every other point properly attended to nugatory, and none more than that of watering. Some plants, it is true, have such strong or accommodating constitutions, that they will bear for a time too much or too little water with impunity: but that is not the case with the genus Epacris, though even they are not so dangerous to neglect as the Heath tribe. When newly potted, they do not require so much water as when the roots begin to fill the pots, and the branches are then growing rapidly, and a large quantity of fresh foliage is produced. The quantity of water then, as the plants grow, should be proportionately increased, especially during the summer months; and when it is applied, enough should be given to thoroughly wet the whole soil in the pot. The dribble by dribble system of watering is very mischievous; one-half or more of the ball is never moistened at all. This may be easily seen by turning the ball out of the pot two or three hours after watering; the liquid will be found only to have reached perhaps an inch or two below the surface; and in that case how can the roots exist or thrive in such dry-as-powder soil? When, therefore, a plant needs water, give it liberally; but, on the other hand, take care that it is not glutted or soddened with it. Too much is quite as injurious as too little. The surface will then appear dry, whilst the inside will be too wet. The roots then perish at the ends, the young shoots flag in consequence, and the unthinking operator waters again heavily, and the evil thereby is increased; the leaves turn yellow, and often death ensues. Avoid, then, these extremes, and the plants will continue healthy, and progress satisfactorily.—*T. Appleby*. (*The Florist.*)

A Tulip Book.—Mr. William Harrison writes in the Midland Florist for March, "A fresh Tulip book should be made at leisure every year, copied from the Cabinet, writing the names of the flowers on the left-hand page only, and leaving the right hand one vacant for remarks, thus:—

Tenth Row.	Remarks.
1. Triomphe Royale	pure bottom, good cup, light flame.
2. Addison	p. b., g. c., grand feather.
3. Duke of Northumberland	p. b., g. c., grand flame.
4. Anastasia	p. b., g. c., fine dark ro. feather.
5. Lawrence's Friend	p. b., g. c., dark f. and fl.
6. Polyphemus	p. b., g. c., light fl.
7. Lady Crewe	small, fine f.

This keeps a correct account of the different strains of the varieties in your possession, and is an interesting record to refer back to in future years. The following abbreviations may be used, as they occupy little space, and are sufficient to show the character of the different flowers:—p. b. means pure bottom, g. c. good cup, f. feather, fl. flame, l. light, h. heavy, d. dark, s. stained stamens, p. s. pure stamens, &c.

[Such an arranged book would be a valuable pocket companion for every person who delights in flowers in general: descriptive particulars of all they admired being recorded, would not only prove interesting to review, but be very useful in making selections for future cultivation.]

Soil best suited for the Rose.—I have visited all the nurseries of the large Rose cultivators in England, and in no part have I found them grow and bloom vigorously as they do in the county of Hertford. The soil they grow best in is a rather strong yellowish loam, not less than half a yard deep. This being enriched freely with *well-decomposed* dung taken from the cow-yard, grows them to perfection, and they endure for many years in a vigorous state, with proper pruning, &c. All who desire to grow the Rose well, and have not such a *deep* loamy soil, should, as far as practicable, provide a bed of similar character. Shallow, gravelly, sandy soils will soon destroy all the Roses planted in them.—*Rosa.*

Budding China Roses.—Under the head "Flower Department," in one of the Numbers of your Cabinet, you mentioned it was time for "budding all sorts of Roses, except China and its varieties." I shall feel obliged, if you will inform me when the proper time is for budding them.—*An Amateur of Roses.* [The best time for budding the varieties of the China Rose is in the month of April, or at least as early as the bark will rise freely. Take off the bud formed the preceding year, with a small portion of the wood attached to it, as recommended for Camellias; they will grow freely, if properly inserted and well bound with bass, with greater certainty at this season than at the usual one in July.]

Failure of Erinus Lychnidea.—A reader of the Floricultural Cabinet would be very glad of some instructions on the culture and propagation of Erinus Lychnidea. A plant belonging to the said reader is dying, without any apparent cause, in the pot in which it bloomed profusely for the second time last season. It was moved early into a larger pot and richer soil. No grubs nor worms are at the root, nor any appearance of decay. Also some hints as to the cultivation of Genista Linioides and Vestia Lycioides (the hardiest that they will bear) would be very acceptable.—a. b. l.

Failure of Raising Camellias from Seed.—Being very partial to the Camellia, and having what is called a good collection of them, I have for three or four years taken some pains to obtain seed from them, and in which I have been very successful. I have been particularly careful in planting my seed in the same soil in which I grow my plants, but without ever having been able to get a single seed to grow, although placed in good bottom heat and carefully attended to; my disappointment has therefore been (as you may well imagine) very great. I have again this year a large quantity of very fine seed, which I have been most careful in impregnating with some of my best sorts, and as I am very desirous of being more fortunate than heretofore, I trust I shall not be considered as wishing to pry too deeply into the secrets and mysteries of the Camellia flower, in requesting the favour of some information (through the medium of your very interesting and useful publication) as to the proper method of growing these seeds; namely, the best time to plant them, the proper soil, and the treatment most suitable to them. Perhaps some of your correspondents, who are conversant with the subject, will oblige me by information thereon.—*Tyro.*

Labels.—I have seen several remarks in your pages lately respecting the advantages and disadvantages of different labels for plants. I enclose two, which I always use, and which have been in pots twelve months. The wood is first painted with genuine white lead, ground stiff in linseed oil, which must be thinned with spirits of turpentine, and laid on in the usual manner. When dry, it is easy to write upon it with ordinary ink. The effect of a house thus labelled is neat and light. After the labels are written upon, I varnish them twice with a quick drying varnish, to prevent them from absorbing moisture. Of the specimens sent, the one with two wires is placed upwards on the stand beyond my easy reach, and cannot turn round when watering; the other I use for those plants close at hand, and which are easily examined. It is needless to say, that they are of my own make.—*H. S. Blundell, Hull.* [These labels consisted of thin square wooden heads, with the corners cut off. One of them was supported by two small copper wires; the other by one only. They are exceedingly legible and neat, and looked as if they would last good for years.]—*Gardeners' Chronicle.*

Propagating Cape Ericas.—The most general method of increasing the Heath in this country, is by propagating from cuttings of the young shoots, which should be taken off when the wood becomes of a firm texture, when it will not be so liable to be injured by damp, as is frequently the case when put into the cutting-pot in a tender state. The best season for putting in Heath cuttings is from March to July; but the operator must be guided in this by the state of the shoots which are intended for this purpose. In fact, most of the species will strike root if put in at any time of the year, provided the cuttings are taken off when in a fit state. To procure shoots of the less free-growing sorts, they may be assisted by placing the plants in a little artificial heat, at the early part of the season, which will be the means of furnishing good cuttings; when they should be carefully stripped of their leaves to about half the length of the cutting, with a sharp knife or scissors, and the end cut clean across. They will then be ready for inserting into the cuttings pot, that should be previously prepared, and filled within a couple of inches to the rim with the drainage; and then have a layer of the fibrous parts of the soil placed over the crocks, when the remaining space should be filled up with sharp pit sand, well washed, and cleared from all earthy matter, &c. The sand should, lastly, be well watered, and made perfectly firm and level, when it will be fit for the reception of the cuttings, which should not be inserted deeper in the sand than is necessary for the fixture of them, to avoid being displaced in the watering, which should be liberally supplied while they are striking root.

Many of the sorts will have formed good roots in the course of eight or ten weeks, whilst others will require as many months. In autumn and spring the cuttings should be placed in a shaded part of the stove; but in the summer season they will succeed equally well in a cold frame, shaded from the mid-day sun.

On Flowering Dutch Bulbs.—In your March Number are some excellent directions for the treatment of Dutch bulbs in pots; but what I am particularly desirous of knowing is, the management of such bulbs after they have done flowering in water. I am particularly fond of these beautiful flowers grown in glasses, and generally succeed in having them flower very nicely in the winter, as I buy very good roots. But if you, or any of your correspondents, will inform me how to treat them when they have ceased flowering, I shall be extremely obliged. I am aware they will deteriorate, and probably not blow for some seasons again in water, but with me they have ceased to flower at all.—*Amicus.*

On Pelargonium ardens.—I have had a plant of the Pelargonium ardens major (one of the bulbous-rooted Cape Pelargoniums) for some years, and changed the description of soil it was in three or four times, but I have not been able to cause it to produce blossoms; the plant has been generally in a healthy state, and I have succeeded in increasing my stock, as I have several younger plants. The old plant, as well as the young ones, has been generally kept in a hot-bed. Perhaps some of your readers would assist me. I ought to add, perhaps, that I have no conservatory to turn it out into, but have a good greenhouse. I am partial to this Cape section of Pelargoniums, and much admire the very distinct beautiful kinds that are shown at the Exhibitions at Chiswick, Surrey Gardens, and Regent's Park. I should be greatly obliged if some reader, who has had experience in their successful management, would favour me with the necessary particulars. I would purchase all the kinds if I could manage them properly; but not succeeding with the P. ardens major, I am afraid to venture farther, but with instructions from a practical grower.—*Amator Florum.*

Blooming Sparkalia formosissima (Amaryllis Jacobæa of some).—A correspondent recently asking for advice as to this plant—I beg to state that I have succeeded admirably to bloom it for many years by the following treatment. In May I plant my bulbs in a border of sandy peat and loam, in a sheltered situation, in which place they remain until September. I then take them up and dry them, taking care not to injure the roots. When in bloom, the flowers must be sheltered from rain or rough winds. I keep the bulbs in a dry room until the returning season for planting.—*A Country Curate.*

An Effectual Method of Banishing Ants from any particular Plant or Spot infested with them.—With a trowel turn up the soil containing the ants, eggs, &c.; let it lie loosely, and pour upon the place a pot of sand. In a few days the ants will have deserted the spot, being effectually prevented by the falling in of the sand from continuing their labours.—*Experimenter.*

Achimenes suited for forming what are termed Specimen Plants for Exhibitions.—In the *Cottage Gardener,* Mr. Appleby states the following to be the best. Achimenes gloxiniflora, white, spotted with crimson; A. longiflora, blue; A. Jauregia (A. longiflora alba of some), white, with pink stripes; A. Mountfordia, scarlet; A. patens, purplish crimson; A. pedunculata, orange, spotted with crimson; A. picta, orange scarlet; A. Tugwelliana, purplish crimson; A. venusta, rosy purple. To these may be added, A. floribunda elegans, bright rose. These grown, as is done at Kew so admirably, in pans eighteen inches across and six inches deep, will make showy plants. The compost Mr. Appleby recommends is formed of chopped sphagnum (white moss), fibry peat, turfy loam, and half-decayed leaves, in equal parts, with a free mixture of sharp sand. Chop the moss pretty fine; it will mix better with the other materials. At Kew, the compost is richer. See Volume of Floricultural Cabinet for 1850, where we gave particulars.—Editor.

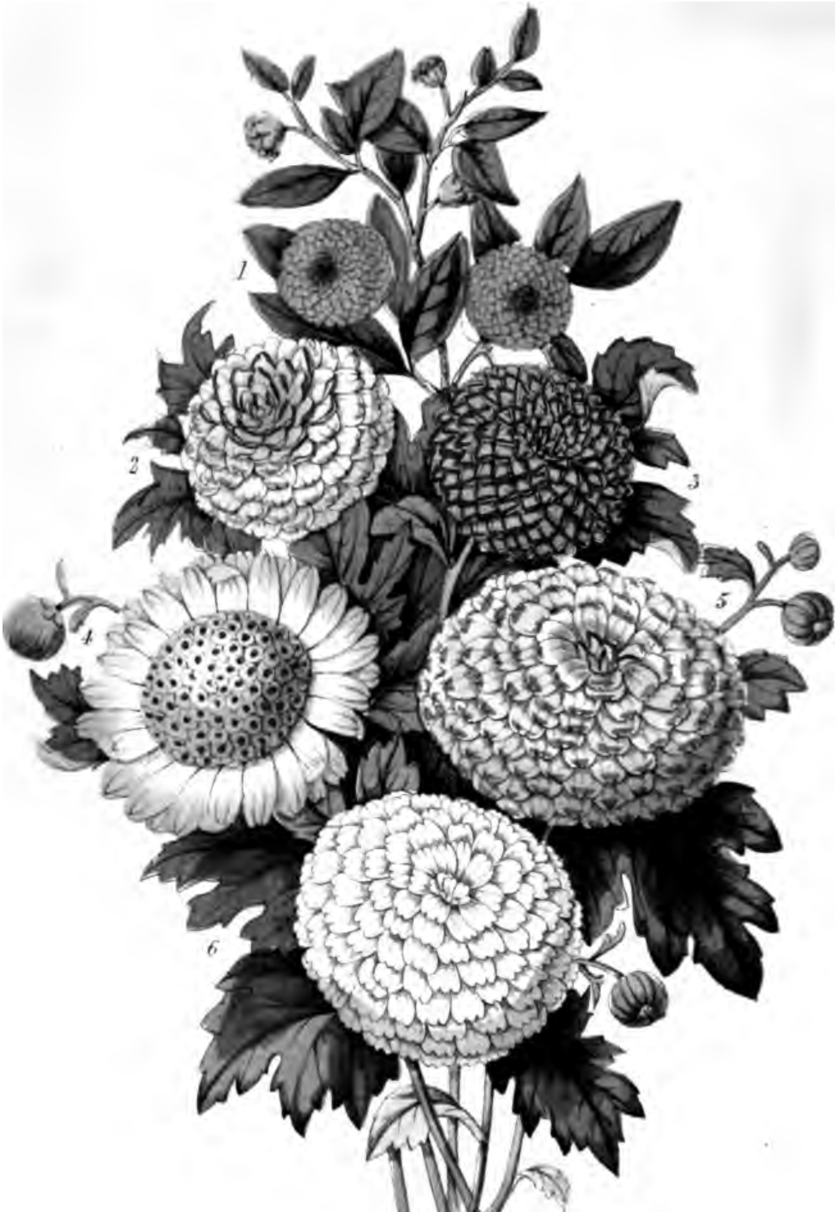
Double Crimson, and Double White Flowering Peaches.—A few months back we noticed these new hardy Peaches, which had been introduced from China by the Horticultural Society. They have bloomed most beautifully this season, and are a most valuable acquisition to our spring-blooming shrubs, &c. They are highly deserving a place near every mansion and villa. When they become the size of our Almonds they will be the admiration of every beholder. It is stated that the Chinese have a good collection of other kinds, of different colours.

Bignonia Cherere.—Observing it stated, at page 152, that to make this plant flower, "it must be grown with plenty of bottom heat," I beg to say that for some years it has flourished in great luxuriance, and blossomed finely, planted in a narrow side border of my conservatory. The roots have plenty of "space to run in," but there is no bottom heat, and the plant is on the coolest side of the house. I have no doubt it would do well in a moderately-warm greenhouse, if planted so that the roots could run in a border, or in well-drained soil under the floor: and whether for a greenhouse or a conservatory, or in whatever situation it will flourish, I do not know a climbing plant more worthy of cultivation, combining as it does a remarkably fine, deep-green foliage, with beautiful flower-buds and rich glowing-red flowers.—*Halesleigh* (*Gardeners' Chronicle*).

Best Winter-blooming Ericas.—Having small flowers, and bloom most profusely. E. persoluta alba, white; persoluta rubra, red; floribunda, pink; gracilis autumnalis, red; regerminans, red; regerminans alba, white; gracilis vernalis, red; Caffra, white.

The following have larger flowers: E. Linnæoides superba, purple and white; Wilmoreana, pink and white; cerinthoides, coronata, and superba, scarlet; hyemalis, purplish-red and white.

Young plants should be procured in spring, and a season's growth prepares them for the next winter's bloom.—*An Amateur Cultivator.*



1. *Myrtus communis flore pleno rubro*

2. 3, 4. 5 & 6. *Chrysanthemum indicum minimum*; Hybrid varieties.

JUNE, 1852.

ILLUSTRATIONS.

"WALK out beneath the roseate skies;
Eye, ear, and heart awake;
List to the melodies that rise
From tree, from bush and brake.
Each fluttering leaf, each murmuring spring,
The great I AM doth own,
To Him the soaring sky-larks sing
In music's sweetest tone.
Canst thou not sing? Oh! leave thy cares
And follies; go thy way;
Let morning praises, morning prayers,
Go with thee through the day."—BARTON.

MYRTUS COMMUNIS FLORE PLENO RUBRA.

A COLOURED engraving of this beautiful variety of Myrtle has been forwarded to us by Herr Schnieke, of Berlin, in Prussia. In the remarks upon it, he observes it is as hardy, and grows and blossoms as freely as the common species.

MYRTLE.—Ancient writers record that it was so named from Myrsine, an Athenian damsel, and favourite of Minerva, who, on account of its beauty, held it sacred to Venus, as the Olive to Minerva, the Poplar to Hercules, the Ivy and the Vine to Bacchus, the Hyacinth and the Bay to Apollo, &c. *Myrtle,* too, was the symbol of authority for magistrates at Athens: bloodless victors were crowned with Myrtle; and hence the swords of Harmodius and Aristogiton were wreathed with Myrtle when they set forth to free their country from hereditary monarchy.

Thomson the poet compares a young beauty growing up in retirement to a Myrtle among the Apennine Mountains:

"Thoughtless of beauty, she was beauty's self,
Recluse amid the close embowering woods:
As in the hollow breast of Apennine,
Beneath the shelter of encircling hills,
A myrtle rises, far from human eye,
And breathes its balmy fragrance o'er the wild"

In Cornwall and Devonshire, Myrtles flourish all the year round in the open air, and there are hedges of a considerable height, strong and healthy. Mr. Keppel Craven describes the hedges in Naples to be as commonly composed of Myrtles and Orange-trees as ours are of Thorn and Privet: their fragrance, too, when in blossom, far surpassing our own Hawthorn. The **Myrtle** is designated "the perfection of neatness and elegance, whose leaf and flower are alike worthy of each other."

1. CHRYSANTHEMUM INDICUM MINIMUM.

Dwarf Chinese varieties.—No. 2. **Ariadne** (Pertuze's), very double, in profusion. No. 3. **Quasimod** (Lebois), profuse bloomer, and has a charming appearance. No. 4. **Alveoliflorum** (Lebois's), a superb formed *Anemone* flowered, very distinct and beautiful. No. 5. **President Decuisne** (Lebois's), an admirable blooming variety, very elegant. No. 6. **Dame Blanche** (Lebois), a snow-white, with the edges of the petals fringed like the Camellia fimbriata, and the flowers are neatly imbricated.

All the varieties are pretty additions to this very interesting class of Chrysanthemums, and they merit a place in every collection. There are a number of other beautifully distinct varieties also offered for sale for the first time this season. We have seen flowers of several of these, and can highly recommend them. The raisers highly merit the thanks of all lovers of these superb autumn and winter blooming plants.

NOTES ON NEW OR RARE PLANTS.

Berberis Nepalensis.—An East Indian half-hardy evergreen shrub. It has stood out in the garden of the Horticultural Society at Chiswick during the last winter without sustaining any injury. It is understood to prefer sheltered nooks in the Himalayas, and in such places only to display its beauty. The leaves are pinnated, large, when full-grown have five pairs and the end odd one. Each leaflet is edged with spines. The flowers are borne in compact, erect racemes, of a rich bright yellow, very pretty. It is a fine species, which has been first obtained in this country at the Royal Gardens of Kew. (Figured in ***Paxton's Flower Garden***, 79.)

Bilbergia polystachya.—A native of Brazil, an evergreen hothouse perennial, belonging to the Pine-apple order of plants. The flowers are produced in a large conical-shaped spike, the bracts being of a crimson-red, and the corollas of a blue colour. Very pretty. (Figured in ***Paxton's Flower Garden***, 80.)

CENTROSOLENIA GLABRA. Of the order of Gesnerias.—A small prostrate epiphytal plant, having white flowers about the size of the Achimenes coccinea. From the West Indies. Is in the Royal Gardens at Kew.

CERASUS ILLICIFOLIA.—A hardy *evergreen* Bird Cherry, which has Holly-like leaves, with a profusion of flowers in racemes similar to the common Bird Cherry. This valuable evergreen was discovered in California, and merits a place in every pleasure-ground.

CŒLOGYNE CUMINGII.—An orchid introduced by Mr. Cuming from Singapore, and first flowered in the stove at Messrs. Loddiges. It is also in the Royal Gardens of Kew. The scape of blossoms rises about nine inches high, each raceme having from three to five flowers. Sepals and petals pure white; lip white or cream-coloured, stained with orange. A blossom is about two and a half inches across. (Figured in *Bot. Mag.*, 4645.)

DEUTZIA GRACILIS.—This valuable shrub grows very freely, forming a nice bush, and blooms most profusely, almost covering the plant with its pure white flowers. It is perfectly hardy, and one or more of it ought to be in every shrub-bed or border. It not only thus flourishes out-doors, but is an excellent pot plant for the greenhouse, where it produces a pretty effect. It is a charming plant for forcing, and a valuable winter or early spring plant when forced. By stopping the principal leading shoots, the plant may be formed to any shape or size without injury to its blooming profusely. Standards have been formed at various heights, grafting it upon stout prepared stocks of the large Syringa, Philadelphus grandiflorus; the graceful hanging shoots clothed with its lily-white flowers producing a pretty effect.

FANCY GERANIUMS.—*Perpetual* (Ambrose's), upper petals deep purple, with a rich crimson blotch and light margin; lower petals blush, each having a very distinct spot of purple-crimson.

Superba (Ambrose's), dark crimson upper petals, edged with pink; lower petals blush, with dark markings. Superb form.

Triumphant (Gaines's), upper petals, crimson belted with white; lower petals, crimson edged with white, and centre pure white. Very superb.

GERANIUMS.—*Ingram's Princess Alice* is a profuse bloomer, flowers a bright rosy-pink with a white centre, and a good sized truss.

Lilliputian, a neat, very dwarf, and free blooming scarlet flowering variety. An interesting and beautiful acquisition, admirable for the front of a bed, or vase, &c.

Dazzle, brilliant scarlet, with a white eye, and a dark horse-shoe marked foliage.

Commander-in-Chief, flowers of fine orange-scarlet, with handsome marked foliage, and large trusses of flowers; free bloomer.

Beauty of the Parterre, flowers a bright salmon colour, and the foliage handsomely marked. The plant is of compact growth, and a free bloomer.

Cerise Unique, flowers a bright cherry colour, compact, and free bloomer, good for pot culture as well as bedding.

Having Sweet-scented Foliage.

Exquisite, flowers blush-lilacwith pencilled spots, free bloomer.

Delicatissimum, a very fragrant, free bloomer, flowers white with a purple blotch on upper petals.

Fairy, blush-lilac with a mulberry spot, neat habit, and free bloomer.

Pauline, white, with a rich purple spot.

Innocenza, flesh colour, with a pencilled cherry spot.

HYPOXIS ROOPERII.—Captain Rooper discovered this pretty greenhouse perennial plant growing near the mouth of the Buffalo River, in Kaffraria. It is somewhat like the Star of Bethlehem, and the flower-scape rises a foot high, bearing from four to six blossoms, star-shaped, of a bright yellow colour. Each flower is about an inch and a half across. It flourishes in the greenhouse or pit frame. (Figured in *Magazine of Botany*.)

JASMINUM NUDIFLORUM.—Many of our readers possess this very beautiful twiggy shrub, and it is well worth a place in every garden. It grows from four to eight feet high, perfectly hardy, and may be grown in the open ground as a bush, or (which is best) be trained to a wall or trellis. It begins to flower often as early as December, and continues to May. It blooms very freely when properly treated, each flower being about an inch and a half across, of a rich yellow colour. They are produced in spikes, and are very ornamental, more especially so, appearing in winter and early spring. It is a desirable plant to be grown near the dwelling-house. Like other Jasmines it grows freely, and is easily increased.

It is a native of China; Mr. Fortune found it cultivated generally in the gardens and nurseries in the north of China. (Figured in *Bot. Mag.*, 4649.)

LIMATODES ROSEA.—A terrestrial orchid, discovered by Mr. Lobb near Moulmein, in the East Indies. The flowers are in form very similar to the Bletia (Limodorum of some); they are produced in similar formed scapes, of a smaller stature. The one figured is about ten inches long, erect, and has thirteen flowers upon it. Sepals and petals of a deep rose colour. The tubular part of the labellum is of a pale yellow outside, whitish within, and around the mouth is a red ring; lip oblong, rose-coloured. The plant blooms very freely, and has a beautiful appearance. It has bloomed in Messrs. Veitch's nursery. (Figured in *Paxton's Flower Garden*, 81.)

NYMPHÆA GIGANTEA. GIGANTIC WATER-LILY.—In 1851 Sir W. J. Hooker received specimens of a magnificent new *Nymphæa* from Mr. Bidwell, gathered in the Wide Bay district of Northern Australia, some of whose flowers certainly vie with the ordinary ones of *Victoria Regia*, being a foot across, and of a beautiful blue colour. The leaves are from eighteen inches to two feet across. The flower has numerous petals (the one figured has fifty-two), with a dense mass of deep golden-coloured stamens, forming a striking centre to the blue petals. Sir William received a tuber from Mr. Bidwell, but unfortunately dry and dead on its arrival.

No doubt others will be obtained, and we may soon expect to see in the Royal Gardens this very magnificent Water-lily. (Figured in *Bot. Mag.*, 4648.)

PASSIFLORA ALATA SUPERBA.—The flowers of the original species are very beautiful, but those of *this variety* are even handsomer, and the plant blooms much more profusely. The outer series of the segments of the corolla or sepals are green outwardly, and of an ochreous-carmine within; the inner series of segments or petals are, outside, of a rosy-crimson, tipped with greyish-blue, and on the inner surface deep carmine. The crown of filaments are purple barred below crosswise with white, and in the upper parts mottled with purple and white. It is a hothouse, climbing, shrubby plant, and is one of the most beautiful. Each blossom is three inches across. It merits a place in every stove, or warm greenhouse, &c. If the roots have the warmth of a bark bed, or otherwise so assisted, it greatly contributes to the successful growth and blooming of the plant. All Passifloras flourish in the following compost: Two parts turfy loam, one of turfy peat, and one of well decomposed leaf-mould, adding to the above materials some gritty sand and a liberal sprinkling of *bits* of charcoal. A free drainage, whether grown in a pot or in a bed, is essential. (Figured in *Magazine of Botany.*)

PHRYNIUM SANGUINEUM. (Synonyme, Maranta sanguinea.)—It is of the order of Canna's. The flowers are produced in a compact terminating, branching panicle, the flower-stem rising a foot high. The red flowers have a pretty appearance, and the leaves, which are green on the upper side, are of a deep purple beneath. It is a handsome stove plant. (Figured in *Bot. Mag.*, 4646.)

PORTULACCA THELLUSONIA, LEYSZII.—The flowers are like the species in colour, viz., a bright carmine, but this variety has double flowers. It is an annual plant, obtained by M. Leysz, of Nancy, and a valuable acquisition.

RHODODENDRON CILIATUM, VAR. ROSEO-ALBUM. FRINGE-LEAVED ROSE, WHITE VARIETY.—This very beautiful variety has been raised in the Royal Gardens of Kew. *Nearly two years* ago seeds of the Sikkim-Himalayan Rhododendrons were received from Dr. Hooker, and already (March 7, 1852) six of the seedlings raised at Kew have produced flowers, while the plants are only seven inches high, and many others are showing blossoms. In its native country the R. ciliatum only attains the height of about two feet. The flowers of the present variety are bell-shaped, each two inches long, and about three across the front of the blossom, of a delicate white tinged with rose. Very handsome, borne in large terminal heads. (Figured in *Bot. Mag.*, 4648.)

Swainsonia Osbornii.—A native of Australia, from whence seeds were received by Messrs. Osborne, of Fulham Nursery, where it bloomed last year. It has been kept during winter plunged under shelter along with hardy herbaceous plants, and it appears will be quite hardy. It is a woody, herbaceous, branching, erect plant, of dwarf habit, and blooms very freely. The numerous pretty pea-formed blossoms are first of a deep rose, shading off to purple. They are borne in racemes, each having from eight to ten flowers. A single blossom is three-quarters of an inch across. (Figured in *Magazine of Botany.*)

TREATMENT OF THE GENUS AMARYLLIS.

BY J. R. SANTON, SIDCUP GREEN, KENT.

Before I explain my mode of culture, I beg to quote the opinion of the late Mr. Knight, on the growth of bulbous plants in general. He says, "Bulbous roots increase in size, and proceed in acquiring powers to produce blossoms, only during the periods in which they have leaves, and in which such leaves are exposed to light, and these organs always operate most efficiently when they are young and have just attained their full growth." Bearing these important facts in mind, we will suppose a moderate collection is already in hand, and the object to be attained is to induce the bulbs to bloom in the autumn months. In the first place, they should be potted in December, using pots in proportion to the size of the bulbs. The soil I have found best suited for their growth is composed of two-thirds light turfy loam and one-third of half-rotten leaves and coarse river sand, draining the pots well, and using the compost in as rough a state as possible; if additional stimulus is required, it may be supplied when the leaves are fully formed in the shape of manure-water, every second or third watering. In potting them, observe to keep two-thirds of the bulb above the earth in the pot, not omitting to drain the pots well. They should now be plunged in a pit or frame, near the glass, and where there is a moderate bottom heat, to encourage the bulbs to root freely before they commence growing by the leaf; and to accomplish this, the bottom heat should be considerably in advance of the top. When it is found that the roots have made considerable progress towards filling the pots, they should be removed to a light house, and be placed as near the glass as circumstances will admit; the temperature of this house should be kept between 60° and 75°. The increase of both light and heat will cause the bulbs to grow rapidly, and great care should be taken not to injure the foliage; if any blooms appear they must be removed, and water supplied when requisite. By this treatment the plants will in a short time possess a strong and healthy foliage, at which time manure-water may be safely applied with the best effects. Whenever the appearance of the leaves indicate suspension of growth, water should gradually be withheld, but they must still be exposed to the utmost amount of light and heat until the leaves become of a partially brown or yellow colour, when they may be removed to a dry cool place until wanted for blooming. By the above treatment they will generally be in a perfectly ripened state by the end of April or early in May.

I do not agree with those who advise that during the period of the plant's rest they may be shaken completely out of their pots, for they bloom stronger by being allowed to remain in the pots in which they grow. It will be seen that the roots, if taken proper care of, keep fresh and vigorous during their rest, and shaking them out would greatly weaken their after-flowering: it is not material where they are kept during their repose, provided they are kept dry. Towards the end of August preparations may be made by commencing with all or part of the stock. The roots should be well soaked with water, and then plunged in a mild bottom heat in any pit or frame that may be at work. When the flower-stems have advanced six or seven inches in height, the plants may be removed to a stove to open their flowers, and afterwards placed either as ornaments for the conservatory, or turned out into vases or ornamental pots for decorating the drawing-room, where the nobleness of their flowers and elegance of habit make them suitable decorations. By the above management I have found those enumerated below bloom quite as strong as they usually do in the spring. Johnsoni, Reginæ, Vittata, Reticulata, and their allies, frequently have three or four spikes of bloom, and attain the height of from three to five feet. Immediately after they have done blooming they should be partially shaken out, disturbing the roots as little as possible, and re-potted as before advised, placing them in a bottom heat until the roots have taken hold of the soil, and then is to be pursued a similar course of treatment as before recommended. In conclusion, I beg to add that few flowers will better repay the little extra trouble their successful cultivation requires than the Amaryllis, and that none is susceptible of greater improvement. Their cultivation appears to have retrograded of late years, and this genus has, I think, unjustly been thrown into the shade by more favoured races; still I hope some spirited cultivators will again bring them into public estimation, and place them in company with the present more esteemed showy flowering plants.

List of kinds to bloom in the Autumn.

Amaryllis Johnsoni.
,, Johnsoni reginæ.
,, reginæ.
,, reticulata.
,, vittata.
,, acramanni.
,, concinna.
,, grandis.
Amaryllis insignis.
,, picta.
,, Solandiflora vittata.
,, Swcetii.
,, marginata conspicua.
,, nobilis.
,, marginata venusta.
,, aulica.

And several other hybrids.

EPIPHYLLUM TRUNCATUM.

This very showy, beautiful flowering plant, formerly known as *Cactus truncatus*, certainly merits universal cultivation, and ought to have a place in every stove, greenhouse, conservatory, or dwelling-room. By proper treatment it will flourish in each habitation above named.

In addition to the original species there are several varieties of great beauty; two, viz., the lilac-coloured and the violet-coloured, are very distinct, and produce a striking effect with the bright red and crimson colours: and when in profuse bloom, what plant of its size is equal to it as an ornamental bloomer? The flowers produce a very conspicuous display among the cut specimens exhibited in the London floral marts. The general growers for those places do not attend to making the plant appear to the best advantage; of course their object is to obtain the most flowers in the least space, and at the least cost. But in private establishments, the aim should be to have the plant produce the finest effect, and when a good specimen plant of it, under judicious management, is to be seen in the month of November, whether its elegance of form, or the colour, beauty, and abundance of its flowers be regarded, there is scarcely any plant to be found better adapted for decorative purposes. Having lived at a place where this plant was extensively grown, both in a dwarf and a standard form, I may be allowed to say, that grafting and after-culture is so easily managed as to require no particular notice. The stocks employed for the purpose were Pereskia Bleo and Cereus speciosissimus; the latter I consider the more preferable, and, if it is about three feet high, with the grafts inserted all around, at a regular distance apart, to within six inches of the pot, and grown in a conical shape, it will be found to have a most pleasing effect. The disadvantage attending the Pereskia stock is, after the plant has formed a good head, which will be in the course of four or five years, I have found the stock incapable of transmitting a sufficient supply of nutriment to its graft, which fact has been fully verified by the emission of roots from the young shoots of the Epiphyllum. If the woods be properly ripened in the autumn by exposure to the sun and a limited supply of water, they will flower well, and will bear to be forced or retarded, so as to keep up a succession for a length of time during the winter months.

TREATMENT OF IPOMŒA HORSFALLII.

BY AN AMATEUR GROWER.

Ipomœa Horsfallii is certainly one of the most magnificent climbers we possess; for this, a stove is indispensable; indeed, the roof of a house devoted to Orchidaceæ seems its most natural place, and in this situation I have it, and it is one of the most beautiful objects when in bloom. It requires a rich loam of an open texture, and does best planted in the border of the house. The earth about the roots of plants so placed should be renewed every season with loam and well-rotted manure, perfectly incorporated. It will, however, succeed in a pot. The plant should be allowed to have a *good rest* in the winter months, at which time it should be pruned back pretty close. It will begin to push new shoots in April; these must be carefully tied in their respective places, or by pushing against the glass they are frequently broken; all superfluous shoots should be removed; in short, the knife should be freely used during the whole of the growing season. By the end of June it will begin to produce its rich dark crimson blossoms, when it must be shaded from the sun, or the flowers lose their brilliancy, and their duration is materially shortened. It is propagated, though with some difficulty, by cuttings. The easiest mode is by grafting on stocks of I. insignis. To increase it by cuttings, choose young wood, pretty firm at the base; take them off when about three inches long; square the bottom end, without shortening or cutting more of the leaves off than can be avoided; pot them in fine silver-sand, and cover them with a bell or hand-glass; this must be wiped every day: they require a brisk bottom heat. The method of grafting is a curious operation; it is done by cutting off a strong root of I. insignis, and a growing shoot of the plant under consideration, and joining them together with a *cleft graft;* this must be done neatly: plunge them in brisk bottom heat, cover them with a hand-light, and keep them constantly shaded. They require, with the same attention as for cuttings, about a month to unite, when they may be hardened off, and subjected to the same treatment as for mature plants.

CULTURE OF PELARGONIUMS, TO HAVE THEM IN BLOOM THROUGHOUT THE WINTER SEASON.

BY THOMAS CLARK, OF WINNERLY GARDENS, HANTS.

THE great improvement effected in this tribe of flowering plants has not only extended to a superior form of blossom, but we now have many varieties, both of the general show Pelargoniums as well as in the fancy and the scarlet-flowering sections, that far exceed any of the older race in a profusion of bloom, as well as in the various rich colourings. Another particular peculiarity is, we have a fine race now that, by proper culture, will bloom from the beginning of October till the end of April, or later. The fine-blooming specimens that are to be seen at Covent Garden Market, London, during the winter season, affords proof that it can be done. Gaines' King, Admiral Napier, and Alba-multiflora, are generally to be seen there in abundance, either plants or cut flowers. But these, and many others, may be had in bloom throughout the year, by due attention in successive operation with them; pruning, potting, and taking into the house, &c., the same varieties at various periods. To have any desirable kinds in bloom through winter, in the first week in May put in cuttings to strike, placing them in moist heat. As soon as they are rooted, pot them into 60-sized pots, and replace them in the frame for a week, to assist them in striking root afresh. At the end of that time, remove them to a cool frame, or a sheltered place, where they can have plenty of air, without being exposed to strong winds. By this means the plants will get stout and bushy. The pots should be placed upon coal-ashes, an inch or two deep, in order to prevent worms getting into the pots. The second week in August, repot the plants into 48's. If any flower-buds appear during this month, cut or pinch them off, but do not shorten the points of the shoots; for if this be done at any time after the middle of June, the plants will not bloom the following winter.

By the above mode of culture, the greenhouse may be had quite gay with flowering Pelargoniums throughout winter, especially so with the new scarlet race.

About the end of April, cut down those plants which bloomed in winter, and place them in a cool frame; by this means space will be given for those that are to bloom in summer. As soon as the plants begin to push shoots, repot those that require it, and set them out in the open air, on a floor of coal-ashes: the plants will then flower in August and September.

Cuttings should be struck every year, and cast away, by planting out in open borders, &c., all the old plants.

Attentively adopt the above method of culture at successive times, and you may have Pelargoniums in flower every month in the year. I am ready to admit that the blossoms are not equally fine at every season; they are, of course, finest during the summer period.

THE FLOWER GARDEN: ON THE PRINCIPLES OF GROUPING COLOURS.

BY H. BOCK, HAWTHORN GROVE, DORCHESTER.

"A garden is a work of art, using the materials of nature."

The grand object to be attained in the formation of a flower garden, is to produce something that shall be pleasing to the mind, and therefore it must be beautiful and interesting. Its interest may consist in the variety and number of sorts of plants it contains; the individual beauty of each; their associations, their relations and affinities to each other; their progressive growth and ultimate maturity; and above all, their capabilities of adaptation to the desired end.

The principles of beauty have been defined to consist of utility, interest, and unity; these principles include convenience, order, neatness, and everything that conduces to the purpose intended.

To accord with the principles of utility and interest, each of the materials employed in any composition must show clearly its adaptation to the end in view; for however pleasing and beautiful a thing may be in itself, if placed in a position, or used for a purpose to which it is unsuited, it loses that admiration to which its qualities might otherwise have entitled it. In a flower garden, these principles may be applied alike to the beds, plants, and ornaments; for a bed, which in an appropriate situation would excite a feeling of pleasure in the mind, if placed where it was unsuited, would, on the contrary, tend to produce pity and disgust; and the same of plants, whether in respect to size, colour, or qualities; while in regard to ornaments, instances of bad taste in the employment of statues, vases, fountains, &c., are far too common; and we may not unfrequently see a Cupid squirting water from his mouth in the midst of a basin, or a Diana going a hunting among flower beds.

Unity.—The first principles in all combinations, whether in lines, forms, colours, or sounds, is that of producing a whole. "Congruity of style, or a proper adaptation of the several parts to the whole, uniformity of character and harmony of parts with the whole," says Repton, "are different modes of expressing that unity, without which no composition can be perfect. Now the eye can only see, or the ear hear, one thing at a time. The object seen, or the sound heard, may be composed of various minor objects or sounds, but they must all be united or blended together in such a manner as to be seen or heard at one time, as one object, or as one sound, in order to produce an agreeable effect:" for

> "Whate'er its essence, or whate'er its name,
> Whate'er its modes, 'tis still in all the same;
> 'Tis just congruity of parts combined,
> Must please the sense, and satisfy the mind."

Every composition ought to consist of three parts, in which the central part ought to be the leading or predominating feature, and to which the others ought to be subservient; while, at the same time, the two sides must bear a certain balance or proportion to each other, in order to render the whole symmetrical and satisfactory to the mind.

Contrast and variety are also great elements in beauty, and may be displayed in the size and shape of the beds, and in the height, colours, and habits of the plants. At the same time, due harmony must prevail, so that violence is not done to the principles of unity and symmetry, by making some of the beds very large, and the rest very small; or by placing tall plants in small beds, and *vice versâ;* but the size of the beds should decrease in gradation from the largest to the smallest, and the height of the plants must be in proportion to the size of the beds. Their general dimensions, also, should bear a due proportion to the size of the whole, so that we may not produce a large garden composed of a great number of very small beds, or a small garden composed of beds of a large size. And moreover, the whole garden should not only be in harmony in all its parts, but should also harmonize with the surrounding scenery; and as a flower garden is confessedly an artificial object, while no attempt should be made to conceal or disguise its artificial character, but, on the contrary, its distinctiveness or individuality ought to be maintained, it therefore becomes necessary, when placed amid natural scenery, that, in order to make the artificial harmonize with the natural, the transition from the regular lines and forms, and gardenesque appearance of the one, to the irregular lines and forms, and picturesque appearance of the other, should not be sudden or abrupt, but should intermix with, or gradually melt into each other, so that no definite mark may exist where the one ends and the other begins.

To proceed with the arrangement of colours. It is found that in nature there are only *three* original or primary colours, red, blue, and yellow. From the union or mixture of these three, in pairs, all other colours or tints are produced. Thus, yellow and blue produce green, red and yellow produce orange, red and blue produce purple; and by varying the mixture and degree of intensity of each, all other colours or tints may be produced at pleasure.

It being the case that when certain colours are placed in juxtaposition, the brilliancy of each is impaired, and a disagreeable or discordant effect is produced; while on the contrary, when certain others are brought in contact, the brilliancy of each is heightened, and a pleasurable effect is produced in the mind by the harmony or concord which is found to exist, precisely as in the case of chords in music. It has been satisfactorily demonstrated, especially by Chevreul, that it is the opposite or complementary colours, which, when placed together, produce harmony, and thus we have at once a principle for our guidance; and as I believe it will be admitted that in flower gardening it is to the greatest brilliancy that we ought to aim, it follows that we should bring only those colours together which afford the greatest contrast with each other, and not as some have recommended, those that will subdue each other's brightness; for however necessary this may be in dress or interior decorations, I cannot imagine a case in flower gardening where the *slightest* necessity exists for its practice.

The following is a simple method of finding the opposite colour of any other we may wish to employ:—Form any number of concentric circles, divide the first into three parts, the second into six, the third into twelve, and so on indefinitely; then in the first, place the three primary colours, red, blue, and yellow, and the same in the adjoining spaces in the second circle; in the alternate spaces of the second, place the mixtures as above mentioned, which will then contain red, purple, blue, green, yellow, orange, and it will be found that red is opposite to green, purple to yellow, and blue to orange; by continuing the same process through another circle, we shall have twelve different shades of colour, and so on indefinitely.

It may here be mentioned that, in gardening, *white* is substituted for green, for which it answers the purpose even better, for white being merely the absence of colour, it may be used to separate any two discordant colours.

In applying these principles to the grouping of colours in flower gardens, we first attend to the ground upon which they are to be laid down; that is, whether on turf or on gravel, and if on the former, which is what is called a cold colour, the warm tints, reds and yellows, ought to prevail, in order to be more effective by the contrast; but if on gravel, which is itself of a warm colour, blues and greens should predominate.

In a linear arrangement the following may be the order of succession:—Red, white, blue, orange, purple, yellow, rose, white, pale blue, orange scarlet, indigo, straw or lemon colour, maroon or claret white, scarlet, &c. In a circular arrangement, with a central bed surrounded by others, we may take any colour for the centre, and in the others, place those colours which afford the greatest contrast; for instance, supposing a group of five surrounding a white centre, they may be scarlet, blue, orange, rose, and purple; with the centre blue, those surrounding may be orange, white, scarlet, yellow, rose; with a yellow centre, the others may be purple, pink, blue, white, red; the centre red, the others may be purple, yellow, blue, orange, white, and so on. Another method of grouping produces a good effect, where the surrounding masses are all of the same colour, with the complementary colour in the centre; and also in single beds, where the margin and the centre are respectively of contrasted colours, as yellow margined with purple, or the contrary, *red* with white, &c. Another method sometimes adopted for large beds is to have zones of various colours, and supposing the centre to be *white*, the first zone may be scarlet, second purple, third yellow, fourth blue, fifth orange, &c.; always taking care to finish with a warm colour if the bed is on turf, and a cold colour if on gravel.

In a geometrical flower garden it is, of course, impossible so to make the arrangement but that some colours, other than contrasted, shall be in contiguity; all that we can do, therefore, is to take care that each bed shall have at least *one* other of its complementary colour in contact with it; and when we are under the necessity of repeating the same, or discordant colours, if we use alternately dark and light tints, the ill effect will be in great part counteracted; and in this way we may arrange varieties of the same genus, as dahlias or verbenas, in which the whole of the primary colours do not occur.

In selecting plants for flower gardening purposes, three qualities must be sought for, viz., the time of flowering, the height, and colour; and even with our great increased resources, it is a matter of no slight difficulty to provide a sufficiency of sorts containing the desired requisites for the different seasons of the year.

In proportioning the height of plants to the size of the beds, the following rule appears to be tolerably correct:—That the plants ought not to exceed six inches in height in a bed eighteen inches wide, nor increase more than six inches for every foot that the beds increase in width.

The best time to determine upon future arrangements is when the plants are in flower; as we can then observe the suitability of each sort, and the effect of different combinations, as also be enabled to judge of the effect of alterations, either in heights or colours, and by making notes, and sketching out rules for our future guidance, and at the same time availing ourselves of every new variety or species that may be suitable, we may then be enabled to progress in improvement from year to year, without limitation.—*Hovey's Magazine.*

NEW SCARLET GERANIUMS.

Few plants are so admirably adapted for bedding out, or planting in masses in the border, as the Scarlet Geraniums. They flower profusely from June until checked by the frost; and the brilliant effect which they produce is scarcely equalled by any other plants. Until within a year or two, however, the kinds have been tall or rambling growers, and less suited, from their gross habit, to some situations in which they have been planted than the Verbenas. But this objection has been overcome; through the efforts of cultivators, a class of plants has been produced from the old sorts, not only of a dwarf and compact habit, and much more profuse flowering, but the colours have been varied in tints, now ranging from *white* to the most fiery scarlet; and besides this, an additional charm has been given them in the texture, size, and colouring of the foliage; some being of various shades of clear green, others green with brownish tints, while others have still an emerald ground deeply edged with white.

CULTURE OF FUCHSIA SERRATIFOLIA.

BY AN ARDENT AMATEUR GROWER, MIDDLESEX.

The entire family of Fuchsias are highly interesting and beautiful, and the F. serratifolia stands, in my opinion, preeminent above all others. Its large flowers, of such a beautiful china-like rosy-pink tube, and rich orange-scarlet corolla, render it peculiarly handsome, and a large plant of it in profuse bloom is especially ornamental. It is additionally valuable in consequence of its blooming throughout *autumn* and *winter;* but by a proper course of management, it may be had in bloom all the year round, a succession of plants being rested, and started into growth at two or three different periods of the year. The plant, it is well known, grows very freely, none easier to manage or propagate, and it blooms profusely. I admit that it is not generally seen to blossom so liberally, but that is the consequence of improper management. I have several large plants which have never failed for the last four years to bloom in profusion, from the bottom of the stem to the top, and some of my plants are six feet high; others are from two to four feet, &c.

The great failure in not blooming this species arises from the fact of its generally going out of bloom on the arrival of spring, which being the period when nearly all other plants begin to push afresh, the growers of it have generally repotted the plants as soon as done blooming, placed it in a warm temperature to promote its growth, and thus kept it in a perpetual growing state. The result is a plant increased in size, abundance of foliage, and but few, if any, flowers are produced at the expected period.

When my plants cease blooming I gradually lessen the supply of water, and in a week or two afterwards they are removed into a cool greenhouse, and placed behind the stage, not under it, where dripping water would fall upon the plants, and only as much water is given as will prevent the soil from becoming as dry as dust. Thus a period of rest is given for about nine or ten weeks, or even more. At this time I turn the plants out of their pots, carefully loosening away the old soil, cutting back any too-extended roots, and then repot in a compost of rich turfy loam two parts, one part of leaf mould, and one of well-rotted dung in a pulverised condition, adding some bits of charcoal and broken bones thereto. A liberal drainage is given. The plants are then placed in the warmest part of the greenhouse, or medium stove, and as soon as they begin to push afresh an increase of water is given, and occasionally liquid manure, so as to encourage the growth all I possibly can. Generally a number of suckers push forth; these I take away, and pot or otherwise as necessary. Also too many side-shoots are usually produced. When this is the case, I thin them so as to leave the plant duly furnished from top to bottom. The plants soon begin to show bloom, and as before stated, I have a succession, and during the entire year I have one or more in bloom.

Plants repotted in April or May will come into bloom in July or August, and continue till January or February; to have some to succeed them, repot in July. During summer it is serviceable to place the plants out in the open air; the wood becomes more ripened and consolidated.

My plants are trained up to a single stem, and then furnished with side-shoots all their length; so that I have a tree-like trunk, clothed with its branches, and every one terminating with a raceme of noble flowers.

The plant must therefore have a period of rest, then be repotted; it will soon blossom; the new wood must be well ripened and consolidated, and the plant must be kept from frost in winter, and the soil in a dryish condition. Every greenhouse or sitting-room should have one or more of this splendid, beautiful, flowering plant therein.

MISCELLANEOUS SECTION.

HORTICULTURAL SOCIETY, REGENT STREET.—Messrs. Standish and Noble sent small bits of a new Azalea, collected in the north of China by Mr. Fortune, and expected to prove perfectly hardy in this country. It has small, rather blunt leaves, and very small rosy-purple flowers, looking like so many half-inverted bells; so that, independent of its beauty, which is great, it will be exceedingly interesting on account of the form of its blossoms, which are quite distinct in that respect from any Azalea yet introduced. It is expected that a plant of it will be shown at Chiswick in June, when a better opportunity will be afforded of judging of its merits. A Knightian Medal was awarded it. Messrs. Veitch received a similar award for an example of their charming Dendrobium albc-sanguineum. It proves to be a free bloomer, and a distinct and fine species. Other novelties, among Orchids, consisted of a small piece of a flower-spike of the lovely Odontoglossum Pescatorei, and a bloom of an exceedingly handsome new Huntleya from Mr. Mylam, gardener to S. Rucker, Esq. The latter was marked with dark brown in the centre, which was surrounded by a field of pale primrose. A Banksian Medal was awarded it.—Messrs. Henderson sent a new yellow-flowered Indian Dendrobe, and a plant of the same genus from Sylhet, apparently Dendrobium heterocarpum in a diminutive state, was furnished by Messrs. Jackson, of Kingston.—Mr. Bunney, of Stratford, contributed imported plants, which were flowering for the first time, of Dendrobium nobile, or some closely-allied kind, and the charming D. Farmerii, with a fine raceme of white and yellow flowers. A Certificate of Merit was awarded for the latter.—From Messrs. Backhouse, of York, came a Cattleya, named amethystina, but which appeared to be nothing but a variety of C. intermedia. A Thysanotus, from New South Wales, accompanied it, but in the absence of bright light its flowers did not open. Mr. Blake, gardener to J. H. Schroder, Esq., received a Certificate of

Merit for a flowering plant of Dendrobium albo-sanguineum.—Messrs. Loddiges, of Hackney, communicated a collection of Orchids, consisting of a finely-blossomed plant of the Sweet Vanda (V. suavis), the deep purple-flowered Saccolabium ampullaceum, Lycaste Skinneri, the charming Dendrobium anosmum, a species in the way of, but handsomer than, D. macrophyllum, and wanting the strong rhubarb smell which belongs to the latter; also the lovely Oncidium bifolium and two other species; the fragrant Burlingtonia; the somewhat scarce Dendrobium chrysotoxum; a specimen of Aerides affine, with two charming spikes of blossoms; and the cinnabar-coloured Lælia (L. cinnabarina). A Knightian Medal was awarded.—Messrs. E. G. Henderson, of the Wellington Road Nursery, St. John's Wood, sent a continental Camellia, named Rizzio, with two blooms on it, exhibiting the familiar sport of one flower being red while the other was white, faintly striped with red. Along with it came two small Orange-trees, in order to show how freely they bloom in pots in a small state. A Certificate of Merit was awarded for the Camellia.—A finely-flowered specimen of the handsome Azalea Iveryana, white, streaked with bright carmine, fine form, and one of the best varieties, for which a Banksian Medal was awarded, was contributed by Mr. Green, gardener to Sir E. Antrobus, Bart.—Mr. Sommersby, gardener to Major Martyn, sent two dwarf Hydrangeas and a white seedling Petunia.—From Messrs. Henderson, of Pine-apple Place, came a new and very handsome Oxylobium, for which a Banksian Medal was awarded; also a new Gastrolobium, the pretty Boronia tetrandra, the small-growing free-flowering Eriostemon scabrum, and a species of Acacia.—Mr. Wood, of Norwood, sent a collection of variegated hardy plants, and a fine specimen of the variety of Cape Heath, called Hartnelli virens, for which a Certificate of Merit was awarded.—Messrs. Jackson, of Kingston, sent an interesting group of tender variegated plants, consisting of Vriesia speciosa (with two flower-spikes), Dieffenbachia costata, Dracæna terminalis, the variegated Croton, Achimenes picta, and a few smaller plants.—R. T. Clarke, Esq., of Wilton-place, Daventry, exhibited cut specimens of a white Chrysanthemum in bloom, which proves that this useful autumn flower may be had in blossom at this season, if such should be desired. It had, of course, been forced.—The Garden of the Society furnished the sweet-scented Rhododendron formosum, which is also sometimes called Gibsoni; Rhynchospermum jasminoides, whose white flowers are as fragrant as those of a Jasmine; the Californian Ceanothus rigidus, most gay with numberless clusters of blue flowers; the scarlet-blossomed Sage (Salvia gesneriflora), a brilliant plant at this season; Trymalium odoratissimum; and another small white-flowered shrub, called Discaria crenata, which, though scarcely better than a bright green bush in general appearance, emits a delightful perfume when the sun shines on it.

PRUNING ERICA VESTITA, &c.—I shall be much obliged by an early answer to the following particulars:—

1st. If I may, without fear of losing the plant, cut in a large Erica vestita to within about six inches of the pot, in order to form a more bushy plant?

2nd. What can I do to prevent Indian Azaleas growing before they flower, they being in a cool (or cold) room? Also, is any kind more apt to do so than another?

3rd. How can I kill worms in plant pots? If I pour in lime-water, is there not a fear of also killing the plant?—*J. Gledhill.*

1st. All the softer-wooded kinds more readily push after such pruning than the wiry hard-wooded ones. The former are of quick growth, the latter of slow growth. The E. vestita, and its varieties, grow quickly, and unless the plants be many years old, they will push freely; but in every instance a portion of each branch must be left; for if only the main stem be retained, it is hazardous as to its pushing. Such kinds as E. hyemalis, Linnæoides, Wilmoreana, &c., push as readily after being cut in as an Heliotrope does. Such kinds as E. tricolor, Hartnelli, aristata, &c., are more tardy with old plants; young ones will succeed. By nipping off the leads of all the shoots each season, the plants are readily kept bushy for many years. The tribe is easily propagated, and plants may be readily provided as successors. Young bushy ones may be purchased at reasonable prices, in most cases very low; and it is better to have young blooming plants prepared in time to replace those which have become too large. The time of cutting back must be regulated by the period of flowering. Those kinds which bloom "late in autumn" should not be cut in till spring. All that bloom in winter, spring, and autumn, may be pruned as soon as the blossoms fade. At the time of cutting in, do not disturb the ball of soil, but allow the new shoots to push first, and then repot. When the new shoots appear, let the plants have a due proportion of air, or the shoots will be weakly.

2nd. *Azaleas.*—An Article in our next Number shall be given. We suppose your plant has pushed, and the blooming bud not opened. Pinch off the shoots which surround the blossom bud, and the flower will, if not damaged, soon expand.

3rd. Use strong lime-water in a clear, not muddy state, and give sufficient to moisten all the soil; it will either kill, or drive out the worms, and not injure your plant. One application is usually enough, but more may be given if not. When worms are in the soil, it is easy to turn out the ball, and pot it at the side; if the worms are not seen, they soon issue forth, and can be easily dispensed with.

HAMMERSMITH HEARTSEASE SOCIETY'S EXHIBITION was held on May the 12th; and as it is considered the great show for the southern growers of this pretty tribe of flowers, the varieties exhibited may be depended upon as being the very best existing, so that persons desirous of possessing a collection of the best kinds may readily make a selection.

Mr. Edwards has drawn up the following detail in the *Gardener's Chronicle*:—

"We have with much care classified the flowers staged, in order that no difficulty shall exist in obtaining a full knowledge of the several and respective merits of the varieties now in cultivation as show flowers, and of the arrangement which the different exhibitors thought best to adopt. Stands used by dealers for 36 varieties consist of four rows, each containing nine blooms; amateurs 24, are four rows of six blooms;

our enumeration commences at the left hand corner of the back row, which row being completed we continue with the next row below it, left hand end, then again with the third row, concluding with the fourth or front row. We are thus explicit, in order that not only may the colours be readily known, but a knowledge of size be obtained; the back rows being formed of the largest specimens, gradually decreasing as they approach the front. The colours may be known by the following abbreviations:—A, yellow ground varieties; B, white ground varieties; C, yellow selfs; D, white selfs; E, dark selfs. *Amateurs:* 1st prize, Mr. S. Treacher, with Juventa, A; Duke of Perth, E; Queen of England, B; Masterpiece, A; Lady Carrington, B; Pandora, A; Aurora, B; Timour, A; Flower of the day, E; Royal Visit, B; Diadem, A; Duchess of Rutland, B; Lord Carrington, B; Maid of Athens, A; Nimrod, A; Lucy Neal, E; Helen, B; Supreme, A; Constantine, E; Thisbe, A; Almanzor, B; Iron Duke, A; Sambo, E; Kate, B. 2nd. Mr. A. Lane, with President; Climax, B; Pompey, E; Ethelred, A; Royal Visit, B; Ophir, C; Matchless, B; Sir J. Sydney, A; Maid of Athens, B; Disraeli, E; Diadem, A; Queen of England, B; Androcles, A; Mr. Beck, A; Blanche, D; Timour, A; Mrs. Trotter, B; Elgiva, C; Helen, B; Duchess of Rutland, B; Polyphemus, C; Aurora, B; Eustace, A; Exquisite, B; Rubens, A. *Dealers:* 1st, Mr. Turner, with Great Britain, A; Mrs. Hamilton, B; Robert Burns, A; Almanzor, B; Gliff, A; Duke of Perth, E; Lady Emily, A; Euphemia, B; Thisbe, A; Seedling, E; Duke of Norfolk, A; Sir R. Peel, B; Adela, C; Royal Visit, B; Duke of Rutland, B; Miriam, B; Alfred the Great, A; Privateer, A; Sir J. Cathcart, A; National, B; Salt Hill Rival, A; Pompey, D; Sir J. Franklin, A; Sir Joseph Paxton, A; Seedling, B; Diadem, A; Aurora, B; Supreme, A; Sambo, E; Mr. Beck, A; Criterion, B; France Cycole, A; Seedling, C; Seedling, A; Black Diamond, E, Pandora, A. 2nd, Mr. Bragg, with Laertes, A; Queen of England, B; Hercules, E; Lady Carrington, B; Duke of Perth, E; Almanzor, B; Grace Darling, A; Flower of the Day, E; Pandora, A; Aurora, B; Timour, A; Pride, B; Kate, D; Ophir, C; Elegans, A; Mulberry, E; Polyphemus, C; Criterion, B; Constance, A; Royal Visit, B; Constellation, A; Royal Purple, E; Lady Emily, A; Royal White, D; Supreme, A; Rotunda, B; Commander-in-Chief, B; Masterpiece, A; Nox, E; Rubens, A; Rotunda (Hunt's), B; Androcles, A; Lucy Neal, E; Cowper, C; Post Captain, A; Helen, B. First-class certificates were awarded to Fearless (Schofield), A; a flower remarkably smooth, both on surface and edges, colours pure and bright, with well displayed eye; similar, but an admirable improvement on Supreme; Monarch (Turner), A; bold and of good colour. National (Turner), B; a flower peculiar for the extent of ground colour and regularity of the border marking; Sir J. Cathcart (Turner), A, previously described; on this occasion it was in famous condition.

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

THE recent fine weather would allow for the planting out in beds, &c., half-hardy as well as the tender annuals, Heliotropes, Pelargoniums, Verbenas, Petunias, Celsias, Zinnias, Stocks, &c.; but any omissions should be attended to at once.

We have frequently called the attention of our young readers to the desirability of paying strict attention to the judicious arrangements of flowering plants, as regards height and harmony of colouring. It is true that, of late years, this subject has become a matter of study amongst gardeners, and great changes for the better have taken place in this respect; still we are far from supposing that we have arrived at perfection. Always bear in mind—if beauty, order, and effect are desired—that attention to this, next to a well laid-out flower-garden, is essential to their full development. In producing well-arranged contrasts, the different shades of colour must be as distinct from each other as possible: for instance, white should never be placed in contact with yellow, or deep blue with crimson; but white forms a good contrast with blue or red, blue to orange, yellow to purple or violet, dark crimson to light blue, and scarlet should be placed near those which have a profuse green foliage, as red and green form the best contrast. Orange and violet do well. Greenish-yellow and rose contrast well.

The only attention now required with such is to water freely, being careful it does not pass off; tie up, &c. Pinks and Carnations will require due care in securing, and by the middle of the month pipings of Pinks may be taken off, and towards the end layers of some early Carnations be made. Thin away extra flower-buds. Dahlias will require securing, and thin out the shoots, so as only to retain about four or five. Stop the leading stem, to give support to the side ones. Cuttings will soon strike root. If the weather be dry, water daily, a good supply at once: a portion of mulchy manure, spread over the roots, is very beneficial. Seeds of Sweet Williams, Canterbury Bells, Scabious, &c., should now be sown for next year's blooming. Auricula and Polyanthus must be kept in a shady but airy place. Prepare the compost for re-potting in next month. Sow seed as early as ripe. Pansey seed also sow. (See Articles on, &c.)

New Flowers.—Let attention be given to hybridizing, with a view to obtain improved varieties. Roses: maggots often infest the buds; carefully examine and destroy. Green-fly, too, stop at first by fumigation, &c. (See Articles on.) Chrysanthemums: young plants should be prepared for the autumn. Violets for next year's blooming, attend to beds of, &c. (See Articles upon.)

IN THE GREENHOUSE, &c.

The greenhouse plants may now be placed out of doors; let them be duly watered, for if allowed to flag the result is the leaves are damaged. Moss sprinkled between the pots keeps the soil cool.

The house will now have to be kept gay and sweet by Balsams, Globe Amaranthus, Cockscombs, Brachycoma, &c. Re-pot as required, to keep the plants in a growing state. Achimenes will now be coming into bloom; they repay for every attention. Cuttings of nearly all greenhouse plants should now be put off: May and June are the best months for that purpose. Cinerarias are highly ornamental, and well worth encouraging. Any done blooming and seed collected, if required, should be turned out of the pots entire into a bed of rich soil, where there is shade from eleven to four o'clock. There they will flourish, and supply an increase for next year's bloom. Cuttings of Roses may be put in, and will soon strike. Camellias that have been forwarded by forcing the shoots and buds, should now be placed in a cooler situation, to give vigour to them. When the grass of Ranunculus or Tulips is quite dead, the roots may be taken up. Pelargoniums, as they go out of bloom, must be prepared for another season. (See Articles on, &c.)

Ericas.—The early-blooming kinds should be draughted out, and others may follow them as fast as they go out of bloom. Examine the plants very carefully, and see that they are in a proper state as to moisture; and if you are an exhibitor, never put a plant of this or any other kind into a van without previously giving it a good soaking of water. The young plants which are not blooming had best be placed in a pit where they can be exposed or not, as may appear necessary. Stop such as require it boldly back, and train them so as to form a proper foundation for a good specimen. As the principal specimens go out of bloom they may be removed to a shady situation to make their growth, being previously cut in, if necessary. Supports for an awning must be placed over them, so that in case of heavy storms or continued rain, they can be protected a little. Clear weak manure-water may be used occasionally for the free-growing kinds. With regard to ventilation, there is no fear of your over-doing it after this time. Re-pot any requiring it, but do not over-pot; the one-shift system is injurious to nearly all the tribe, the only exceptions are those of rapid growth and robust habit. Rough peat and silver-sand, with bits of stone, &c., and a liberal drainage, are requisites. Epacrises, &c., should also be duly attended to in re-potting, &c.

Azaleas in the forcing-pit must be kept shaded during bright sunshine, and a moist growing atmosphere must be maintained around them. Water freely with weak guano-water, and sprinkle the vacant parts of the house or pit daily, but not upon the bloom. As the plants go out of flower place them in heat, to perfect their wood for next year's blooming. (See Articles on in previous volumes.)

BRIEF REMARKS.

Royal Botanic Society, Regent's Park.—*Exhibition held May* 19.—The Pelargoniums were shown in considerable numbers; the following were awarded prizes:—In the *Nurserymen's* Class, 1st, to Mr. Turner, for Magnet, Mochanna, Prince of Orange, Ajax, Chieftain, Chloe, Magnificent, Pride of the Isles, Constance, Rosamond, Little Nell, and Alonzo; 2nd, to Mr. Dobson, Woodlands Nursery, Isleworth, for nice examples of Vanguard, Rosamond, Cuyp, Mont Blanc, Arethusa, Loveliness, Harriett, Glowworm, Incomparable, Delicatissimum, Purpureum, and Exhibitor; 3rd, to Mr. Gaines, Battersea, for Aspasia, Gulielma, Mars, Virgin Queen, Grandiflorum, Salamander, Mont Blanc, Bruno, Rosamond, Cecil, Marquis of Stafford, Nonsuch. *Amateurs:* 1st, to Mr. J. Robinson, Pimlico, for Alderman, Pride of the Isles, Ajax, Norah, Alonzo, Salamander, Constance, Magnificent, Nonsuch, Star, Conspicuum, and Forget-me-not; 2nd, to Mr. Carragon, gardener to J. E. Lawrence, Esq., Kentish Town, for Prince of Orange, May Queen, Major Domo, Ajax, Mont Blanc, Marion, Gulielma, Alonzo, Rosamond, Ocellatum, Magnificent, and Virgin Queen. Fancies were numerous and in good condition: 1st, to Mr. J. Robinson, for Empress, Madame Meillez, Queen Superb, Alboni, Fairy Queen, and Hero of Surrey; 2nd, to Mr. Roser, gardener to J. Bradbury, Esq., for Queen Victoria, Ibrahim Pacha, Modestum, Alboni, Formosa, and Madame Meillez; 3rd, to Mr. Miller, Edgeware-road, for Jehu superb, Duchess d'Aumale, Jenny Lind, Statuiski, Queen Victoria, and Orestes. *Nurserymen:* 1st, to Mr. Turner, for Hero of Surrey, Reine de Français, Minerva, Carlotta Grisi, Fairy Queen, and Empress; 2nd, to Mr. Ambrose, for Princess Maria, Galitzin, Signora Cassaloni, Defiance, Odoratum, Magniflorum, and Fairy Queen; 3rd, to Mr. Westwood, for Empress, Statuiski, Lady Cooper, Magnificum, Reine de Français, and Madame Meillez. Recommended: Mr. Ayres, Blackheath, for Jenny Lind, Fairy Queen, Duchess d'Aumale, Reine de Français, Formosum, and Statuiski.

Gesnera zebrina.—I have remarked that the Editor has often recommended this plant to the attention of the readers, and referred to the noble flowering specimens in the Kew Gardens. I was first induced to turn my attention to its cultivation from such recommendation, and followed the system of treatment there described, and the success has been most admirable. I have specimens, which have been in bloom from February to the present time, that are four feet high, with several lateral spikes to each, all blooming beautifully. The rich green leaves, elegantly marked with stripes of dark velvet, have a fine appearance, and in contrast with the immense spikes of rich red and orange flowers render the plant highly ornamental; and blooming from January to May, or later, renders them highly valuable; indeed, by resting the tubers at sundry times of the year, potting and starting into growth thus successively—say twice in a year—the plant may be had in bloom the entire of it. I use a compost of one part of rich turfy-loam, one part of turfy-peat, one part of well-rotted vegetable or leaf-mould, and one of old pulverized dry cow-dung, mixed with bits of charcoal, and a sprinkling of charcoal *dust*, with a little of bone-dust, or bits of crushed bones. I grow them in pans eight inches deep and twenty across, having a free drainage. This plant does not root *deep*, but spreads its roots extensively around, so that pans are much preferable to deep pots. In some pans I have but a single plant, in others two, three, four, or five, and in all cases they are highly ornamental. The plant is of the easiest culture, giving the tubers a two months' rest after blooming, and growing them in a moist, warm temperature till they commence blooming, when they may be placed in any other warm situation. They push well at first when placed in a hot-bed frame or warm back bed. They are much benefited by frequent syringing overhead and the under side of the foliage; it preserves them from the attack of red-spider, and otherwise promotes their vigorous growth.—*Richard Scott, Claremont Villa, Fulham, Middlesex.*

Pruning Roses grown in Pots.—These do not grow so vigorously as when grown in the open ground, and in consequence require all the encouragement which can be given to promote their *uniform vigour;* and, in order to effect this, the branches should be thinned at an early stage of their pushing, cutting clean away all the *weakly* ones; and as it sometimes occurs that a *very gross shoot* will push ahead of all others, and, if retained, will rob the other part of the plant, therefore cut away such, leaving only the *medium* sized, and of those only as many as the plant may be open, and yet form an acceptable bushy one. By this *spring* or *summer* thinning those retained will derive essential improvement in their vigour, the extra useless ones being cut away. This summer dressing is particularly necessary with China, Hybrid China, Bourbon, and Noisette Roses. And, as they will require a *winter* pruning, all that will *then* be necessary will be to cut back those shoots retained at the summer dressing, leaving from two to four buds only on each shoot.—*An extensive Grower of Roses for Forcing, London.*

TREATMENT OF LESCHENAULTIA FORMOSA.—This very handsome profuse-flowering plant is not generally well grown. I am a traveller, fond of plants, and visit nearly all the celebrated plant establishments in the three kingdoms, as well as attend most of the principal exhibitions in London as well as the country. In no one instance elsewhere have I seen anything like such a specimen as is shown in many instances at the London shows, and which are grown in that neighbourhood. It appears to me that in the country the plants have not suitable pot-room. A celebrated London grower informs me that for this plant he prefers the ONE-SHIFT system. At first he takes a healthy well-furnished plant, which may be in a large 60 or 48-sized pot, and transfers it early in spring into a pot fourteen inches wide at the mouth and about *nine inches* deep; a deeper pot is injurious. The plant, too, requires to be grown *near the glass;* it then grows freely and bushy, and will also bloom in profusion. If far from the glass, it spindles, and becomes weakly and scanty of shoots. A liberal admission of air, too, is necessary, but a cold east or north wind blowing upon it is very injurious. The *trunk-roots* should not be buried deep; rather high is preferable, for if there be a hollow around the main stem, water will lodge there, and the plant will soon and suddenly perish. If the main stem be buried deep by soil, it is proportionately injurious to the plant. Avoiding these evils, and attending to the other recommendations, large, bushy, vigorous, profuse-blooming specimens will soon be formed, and as readily retained. When the plant is in a *growing* condition, it will require a liberal supply of soft-water, and syringing overhead, when not in bloom. The soil is not sifted, but chopped and well broken by the hand. A good turfy *sandy peat*, with a sprinkling of bits of charcoal, brick, or porous stone, is beneficial. A free-blooming, large, healthy plant amply repays for every attention.—*A Traveller.*

NORFOLK ISLAND PINE, AND THE BEAUTIFUL SCENERY OF THE ISLAND.—The following particulars have recently appeared in the publication "Household Words," and as the noble *Pine Tree* which bears its name is a native of the island, the account will be interesting to our readers:—

"The first glimpse of Norfolk Island that one gets from a ship's deck is made remarkable by a tree—well known by means of pictures and descriptions—the grand Norfolk Island Pine, which clothes the hills to their summit.

"Norfolk Island consists of a series of hills and valleys, beautifully interfolded, rising in green ridges one above another, till they all culminate in the summit of Mount Pitt, the highest point in the island, about 3,000 feet above the level of the sea.

"Through a cutting in the ledge of rock which overhangs the sea, I came now upon an amphitheatre of hills. These hills are all richly dressed in a thick clothing of wild shrubs, flowers, and grapery. On one side is a mount covered to the top with the gigantic Norfolk Island Pine; on another side down goes a ravine that seems to offer a short cut to the interior of the earth; a short and a most pleasant cut, for intricate dark foliage is lighted up by lemon groves, where, here and there, the sun is playing on their golden fruit. I descend by the path into the ravine. Foliage shuts me out from the sun; magnificent creepers (for in nature, as in society, there are creepers which take rank as the magnificent) twist and twirl themselves about my path. The birds that perch upon them glitter like their flowers: lories, parrots, parroquets, beautiful wood-pigeons. But the forest is dark, and I ascend again, and get among such quaint aspects of vegetable life as are made by clusters of large Fern trees, rising with a lean—some to this quarter and some to that—trees sadly wanting in uprightness of character, but carrying their crests fifteen or twenty feet above the ground. These look like grass among the Norfolk Island Pines, which pile one dark feather-crown upon another—crown above crown, to a height of some two hundred feet above the soil. From the summit of Mount Pitt, which I have now reached, I have Norfolk Island in complete subjection to one of my senses. I can see it all. Rock, forest, valley, corn-fields, islets, sunshine on sea, sunshine on birds, no sun in gloomy glades, rays darting into darkness, and revealing parasites and creepers exquisitely coloured, and the bright green fans of the Palmetto rising out of a froth of white Convolvulus; Guava and Lemon, a delicious air, clear sky, and the sharp outline of every light feather of the foliage picked out against it. There used to be Oranges, but once upon a time there lived in Norfolk Island a wise commandant, who voted Oranges too great a luxury for convicts, and caused the trees that grew them to be extirpated; they are now, however, being reintroduced. In a garden belonging to the commandant, called Orange Vale, sight, taste, and smell enjoy a paradise. Delicate Cinnamon grows by the rough stout old English Oak. Tea, Coffee, Tobacco, Sugar-cane, Banana, Figs, Arrowroot, and Lemon, grow in company with English fruits and vegetables, that have been forced by the climate into an ecstatic, transcendental state. The spirituality of a Carrot gets to be developed when it grows up in such good company as that of Sweet Bucks and Bananas. Sweet Bucks are sweet Potatoes, which are very kisses to the palate, and are served out daily as rations to the evil and the good, the convicts and the officers. But, truly, there is need of a fine climate to make compensation for the other details of a residence in Norfolk Island."

Bleaching Leaves.—Sophia wishes to know how she can bleach Lime-tree leaves, after having dissected them, without injuring the fibres. She will be obliged by some person acquainted with the subject giving her the desired information in the July number of this Magazine.

Dielytra spectabilis.—Noticing some remarks by correspondents relative to this plant flourishing in the open ground, I beg to add my testimony thereto. We have a plant two and a half feet high, showing seventeen spikes of flowers and seventy *expanded* blossoms. It was covered during winter with cinder-ashes, but received no other protection whatever. It is on a south-east border, in very coarse and heavy soil, every leaf is free from spot or blemish, and it has never had any support in the way of stakes, &c.—*James Harris, Gardener to T. Ingle, Esq., Wood Hall, near Downham, Norfolk, May* 1, 1852. [This is one of the most beautiful graceful flowering plants, either for in-doors or in the open ground. It should be in every greenhouse, pit-frame, or flower-garden. It makes a charming appearance as a bedding plant. It is easily propagated, treating it as is done in raising Dahlias, by cuttings in spring. Spring-struck plants of the Dielytra, being planted out in the open ground or grown in pots, will bloom from July to the end of summer, or later. Plants that were raised the previous year, and either in pots or beds, will come into bloom in-doors in March, and out-doors in April.]

Hydrangea japonica variegata.—In your numbers for March and May of the present year, you describe and recommend this beautiful variety of Hydrangea. I was induced to procure a plant, and though I expected to find it have a pretty variegated leaf, I beg to state it very far exceeded my anticipations. It most certainly is the handsomest variegated-leaved plant I ever saw. Its pure white and pretty green—in broad contrasted stripe and edging—is most strikingly beautiful. It merits a place in every greenhouse, and will be admired by all who see it.—*J. P. Harvey, St. John's Wood.*

Gas-Tar applied to Walks.—Early last year I noticed in this Magazine a recommendation to pour gas-tar upon garden walks, and subsequently some facts of its successful application have been recorded. The walks in the gardens and grounds under my charge being about three miles in extent, the cost in attempts to keep them free from weeds amounted to a considerable sum per annum, and in wet seasons our utmost exertions could not effect a proper cleaning. The estate is contiguous to a large town where there are three gas companies, so that I had the opportunity of obtaining all I required at an average of one penny per gallon. During the dry months of July and August last year, I had half my walks well cleaned and rolled very even; this being done, I had the gas-tar properly poured over them, so as to have a good bed of it well covering the face of the gravel; and that it might be laid over tolerably equal, I had it stroked over, by means of the back of a rake being drawn over it. This being done by one party of labourers, others immediately followed, and evenly scattered over it as much *fine* gravel as concealed the gas-tar from sight. The following day that portion was rolled evenly, and thus we proceeded till we had completed the extent of near two miles. The edgings are of grass and box; we avoided the gas-tar touching either, so that no injury might be done to them. From the day we finished the portions up to the present (May 12th, 1852) not a single weed has made its appearance thereon, and the surface has constantly been dry, except whilst rain was falling—and then to walk upon left no impression—and the surface was almost immediately dry when the rain subsided. One of the gas companies had a public pathway on the high-road side coated over with gas-tar and sprinkled over with sand at the time I applied it to my walks, and though tens of thousands walk upon it every day, the surface is as good now as at the first day after its completion.—*J. P. Street.*

P.S. The remainder of the walks will be completed this season, and from what I can see of its effects hitherto, the walks will keep in desired condition for very many years.

VERBENA VENOSA.—Last year you mentioned that there was a bed of Mangle's variegated Geranium in front of the large conservatory at Kew, which was mixed with this purple-flowered Verbena, and that it had a very pretty appearance. I wish to try it, but cannot procure plants of the Verbena. If I sow seed now, I fear the plants will not bloom in due time this summer. Oblige me by your opinion in the June number.—*Lucy Neale.* [If you raise seedlings now, pot them and encourage their growth, to endure next winter, and, succeeding, the plants will be strong for planting out next year. We think *plants* of this Verbena may now be obtained at some of the nurseries. We subsequently tried it in contrast with the *Flower of the Day* Geranium, and the contrast of the purple with the much whiter leaves and larger flowers was much more effective and handsomer. No leaves of the Verbena are seen above those of the Geraniums, and the heads of flowers only appearing between the Geraniums produces a striking appearance. Any isolated beds filled with such a mixture of flowers, or with others producing the most striking contrasts, whilst at the same time the plants correspond somewhat nearly in habit, will always be admired, and have a pretty relief from the masses of colour in an harmonized flower-garden composed of beds each of one kind only. The class of bedding plants is now so numerous, that it is easy to make a selection for mixed beds, so as to suit the particular taste of every person. Lists of bedding plants, with their heights, colours, &c., have appeared in previous numbers of this Magazine, which may assist in making desirable selections for such purposes.]

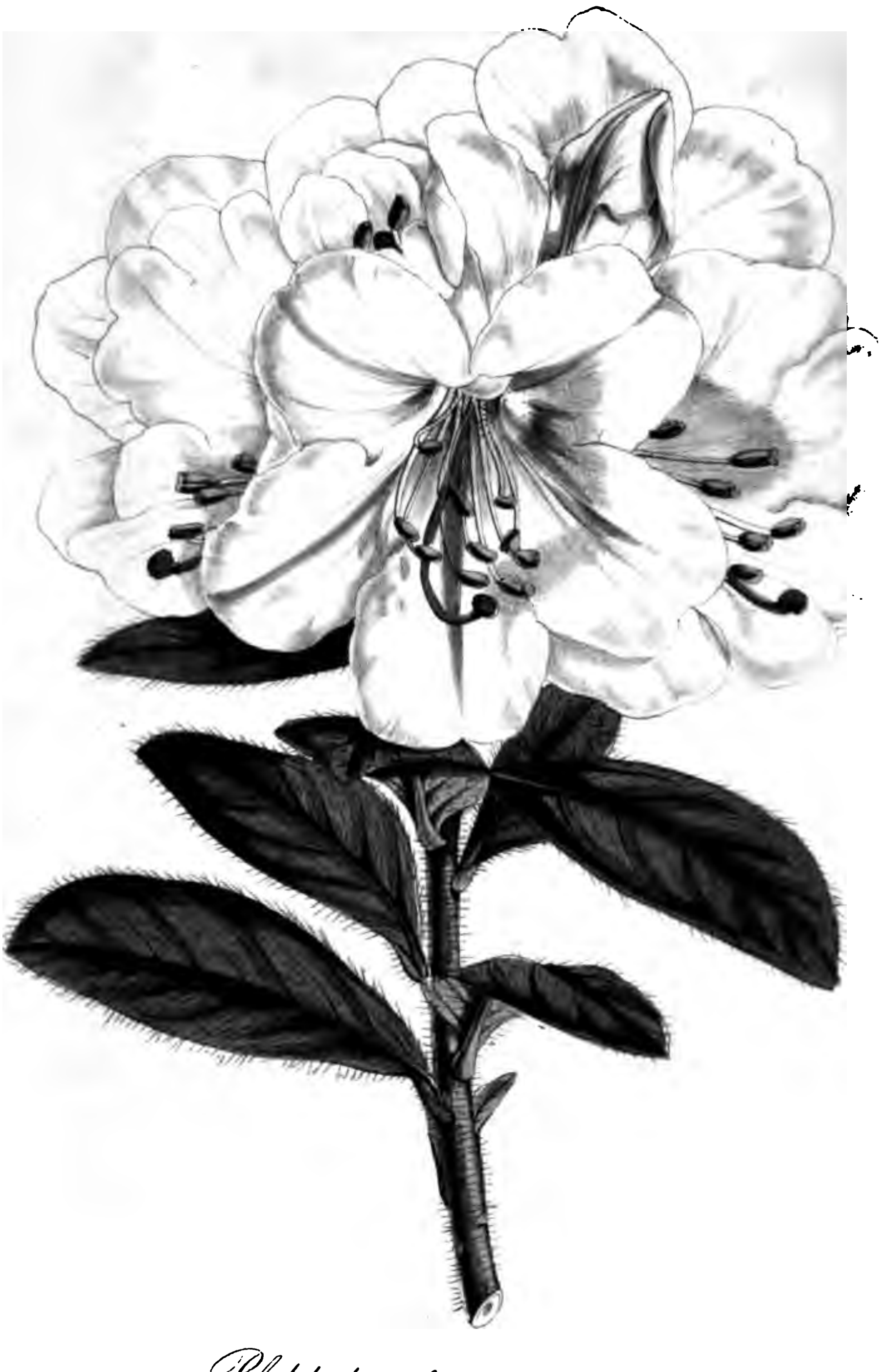
THE HORTICULTURAL SOCIETY'S EXHIBITION.—The first for this season was held on May 12th, in the gardens at Chiswick; and splendid as former collections of plants have been, those on the present occasion very far exceeded them. Such a display of superbly-grown plants, we believe, was never previously brought together in any place or country. We have not space in our present number to give full particulars.

Pelargoniums were more numerous than had been anticipated, and seldom have we seen, even at a June meeting, such plants as those which composed the first collection. They exhibited what is rarely met with in combination, viz., quality with quantity of flower. The plants were large, with foliage in some instances covering a third of the pots. Mr. Turner, twelve varieties in 8-inch pots. The sorts were, Magnet, Mochanna, Pulchrum, Pride of the Isles, Constance, Ajax, Chieftain, Magnificent, Virgin Queen, Rosamond, Gulielma, and Rowena. Magnet was the admiration of everybody. 2nd, Mr. Dobson, Woodlands Nursery, Isleworth, for Chastity, Purpureum, Incomparable, Mont Blanc, Cuyp, Pulcherrimum, Vanguard, Mulvrancy, Chloe, Arethusa, Lisa and Rosalind. 3rd, Mr. Gaines, Battersea, with Cecil, Aspasia, Mont Blanc, Salamander, Grandiflorum, Negress, Marquis of Stafford, Flying Dutchman, Mars, Rosamond, Alphonse and Gulielma.

Six Fancy Pelargoniums—*Dealers*: 1st, Mr. Turner, with Hero of Surrey, Fairy Queen, Minerva, Ambrose's Perfection, Statinski, Reine des Françaises; 2nd, Mr. Ayres, Blackheath, with Fairy Queen, Reine des Françaises, Yarinski, Mirandum, Hero of Surrey, Picturatum; 3rd, Mr. Gaines, with Signet Cambrai, Agnes, Reine des Françaises, Defiance, Odoratum, Magnificum.

Six Fancy Pelargoniums—*Amateurs*: 1st, Mr. Kempster, Blackheath, with Statinski, Bouquet tout fait, Albert, Formosum, Hero of Surrey, Jenny Lind; 2nd, Mr. Bauer, gardener to J. Bradbury, Esq., with Modestum, Madame Meillez, Queen Victoria, Ibrahim Pacha, Albert, Cleopatra.

[*More particulars in our next.*]



Rhododendron ciliatum; var: roseo-album.

JULY, 1852.

ILLUSTRATIONS.

"The *grasses* elegant though not proud robed;
The *mallow*, purpling o'er the pleasant sides
Of path-ways green, mix'd with the helpless *vetch*,
That climbs for aid. Deceitful *nightshade* dressed
In hues inviting; every plushy vale,
Each dry entangled copse, empurpled glows
With *orchis* blooms; while in the moistened plain
The *meadow-sweet* its luscious fragrance yields.
And oh! what odours from the hedge-row breathe
When the soft shower calls forth the hidden sweets!
The *clover* richly feeds the stealthful gale;
The strawberry blushing, hides its modest face
Beneath the mantling leaves."

RHODODENDRON CILIATUM, VAR. ROSEO-ALBUM.

This very handsome Rhododendron is a seedling raised at the Royal Gardens of Kew, where we recently saw it in bloom. It is one of the Sikkim-Himalayan Rhododendrons, and is one of a many that have been raised from seeds which Dr. Hooker collected on the Himalaya. The plant is not above nine inches high, and yet produces such fine blossoms. Several others of the seedlings have flowered, and none of them, it is said, fully resemble in colour the beautiful original *R. ciliatum*, from which the seeds were obtained. Sir W. J. Hooker has decided the one figured to be considered a *variety*. The flowers of this variety are nearly twice the size of those the original plant produced; they were, too, of a uniform lilac-purple colour, whilst these are of a delicate white, handsomely tinged with a bright rosy-red. Dr. Hooker states, the original species grows in its native locality in wet rocky places, seldom found in woods, but in the valleys, at an elevation of near ten thousand feet, and may be considered quite hardy in our own country. Young plants of nearly all the species from Sikkim-Himalaya have endured uninjured in the open air in the Royal Gardens of Kew, having only a bank of earth around them about half a yard high. *R. ciliatum* in its native country only grows to a bush about two feet high, and its blossoms diffuse an agreeable fragrance.

Most of our readers are aware that Dr. Hooker during his botanical mission among the mountains of India discovered a number of beautiful species, which he transmitted or brought to England. Several of them are Epiphytes, growing upon the trunks of trees similar to the stove Orchids, the roots running among the mosses, or decayed parts of them. Dr. Hooker observes in his invaluable account of these Rhododendrons, and their native localities:—"Darjeeling, the locality of the country in which these Rhododendrons were found, lies, we are told, in the Sikkim portion of the Himalaya, and is situated in lat. 27° N., and long. the same as Calcutta, from which it is distant about 380 miles. Its elevation above the sea is 7,200 feet. The mean temperature of the year is about 55° Fahr.

"The mountain Sinchul, upon a spur of which looking north Darjeeling stands, attains an elevation of 9,000 feet, and to the west of it, next Nepal, rises another conspicuous mountain, Tonglo, reaching a height of 10,000 feet. Due north of Darjeeling, at a distance of only 60 miles, the horizon is bounded by the great snowy range, having for its principal feature the peak of Kinchin-junga, which has lately been ascertained to be 28,172 feet in elevation, the loftiest mountain yet known in the world." Dr. Hooker thus describes his first impressions of this scene:—"Much as I had heard and read of the magnificence and beauty of Himalayan scenery, my highest expectations have been surpassed! I arrived at Darjeeling on a rainy misty day, which did not allow me to see ten yards in any direction, much less to descry the snowy range, distant 60 miles in a straight line. Early next morning I caught my first view, and I literally held my breath in awe and admiration. Six or seven successive ranges of forest-clad mountains, as high as that whereon I stood (8,000 feet), intervened between me and a dazzling white pile of snow-clad mountains, among which the giant peak of Kinchin-junga rose 20,000 feet above the lofty point from which I gazed! The heaven-ward outline was projected against a pale blue sky, while little detached patches of mist clung here and there to the highest peaks, and were tinged golden-yellow or rosy-red by the rising sun, which touched those elevated points long before it reached the lower position which I occupied.

"Such is the aspect of the Himalayan range at early morning. As the sun's rays dart into the many valleys which lie between the snowy mountains and Darjeeling, the stagnant air contained in the low recesses becomes quickly heated; heavy masses of vapour, dense, white, and keenly defined, arise from the hollows, meet over the crests of the hills, cling to the forests on their summits, enlarge, unite and ascend rapidly to the rarefied regions above; a phenomenon so suddenly developed, that the consequent withdrawal from the spectator's gaze of the stupendous scenery beyond looks like the work of magic. Such is the region of the Indian Rhododendrons.

"The maximum of Rhododendrons appears to be in Asia, and their head-quarters are on the lofty ranges of the eastern Himalaya, where the mild and moist atmosphere is eminently suited to their habit.

"A certain degree of winter cold and perpetual humidity is necessary, but the summer heat is quite tropical where some of the genus prevail, and snow rarely falls, and never rests on several of those peculiar to Sikkim." In the case of *R. Falconeri*, which grows on the summit of Tonglo, at an elevation of 10,000 feet, Dr. Hooker remarks, that the temperature of the earth in which it grew was, in the middle of May, at 27 inches below the surface, where the roots are chiefly developed, 49° 5′ at all hours of the day; that of the air varied from 50° to 60°.

These observations, and the mean temperatures previously quoted, show that spring and not mid-winter is the season of trial, not only in the case of the Indian Rhododendrons, but in that of very many other half-hardy plants from various parts of the world, especially from the mountain regions of India and South America. Comparing the figures just referred to, it will be seen that during the months of November, December, and January, the difference in the mean temperatures of London and Darjeeling is about 4° only, and the same difference is indicated for the months of July, August, and September. On the other hand, February and May, the transition months between winter and spring, and spring and summer, show a difference of 6°; the spring months of March and April, a difference of 11° and 10° respectively; and in autumn, too, as shown in October, the difference is 9°. "Here we have a solution of the cause of our want of success in cultivating tender plants in the variable climate of Great Britain. Our springs are late and cold, and changeable; and while the winters and summers of Darjeeling and London differ but 3° or 4°, the springs and autumns show a difference of 10° and 12°. This accounts for the excitable nature and early growth of many of our half-hardy Indian plants, as well as the tendency of many such to grow to a late period of the autumn.

"Only four species, *R. Dalhousiæ*, *R. Campbelliæ*, *R. argenteum*, and *R. arboreum*, grow near Darjeeling. The second and fourth form scattered bushes at 7,500 and 8,000 feet; the *R. argenteum* is a small tree, at 8,000 or 9,000 feet.

"It was on the ascent of Tonglo, a mountain on the Nepalese frontier, that I beheld the Rhododendrons in all their magnificence and luxuriance. At 7,000 feet, where the woods were still dense and subtropical, mingling with ferns, pothos, peppers, and figs, the ground was strewed with the large lily-like flowers of *R. Dalhousiæ*, dropping from the epiphytal plants, or the enormous oaks overhead, and mixed with the egg-like flowers of a new Magnoliaceous tree, which fall before expanding, and diffuse a powerful aromatic odour, more strong but far less sweet than that of the Rhododendron. So conspicuous were these two blossoms, that my rude guides called out, 'Here are lilies and eggs, sir, growing out of the ground!' No bad comparison. [Above this occurs *R. arboreum*]. Along the flat ridges, towards the top, the Yew appears with scattered trees of *R. argenteum*, succeeded by *R. Campbelliæ*. At the very summit, the majority of the wood consists of this last species, amongst which, and next in abundance, occurs the *R. barbatum*, with here and there, especially on the eastern slopes, *R. Falconeri*.

"The habits of the species of Rhododendron differ considerably; and confined as I was to one favourable spot by a deluge of rain, I had ample time to observe four of them. *R. Campbelliæ*, the only one in full flower early in May, is the most prevalent. Some were a mass of scarlet blossom, displaying a sylvan scene of the most gorgeous description. Many of their trunks spread from the centre thirty or forty feet every way, and together form a hemispherical mass often forty yards across, and from twenty to twenty-five feet in height! The stems and branches of these aged trees, gnarled and rugged, the bark dark coloured, and clothed with spongy moss, often bend down and touch the ground: the foliage, moreover, is scanty, dark green, and far from graceful, so that, notwithstanding the gorgeous colouring of the blossoms, the trees when out of flower, like the Fuchsias of Cape Horn, are the gloomy denizens of a most gloomy region. *R. Campbelliæ* and *R. barbatum* I observed to fringe a little swampy tarn on the summit of the mountain—a peculiarly chilly-looking small lake, bordered with sphagnum, and half-choked with Carices and other sedges: the atmosphere was loaded with mist, and the place seemed as if it would be aguish if it could, but was checked by the cold climate. *R. barbatum* had almost passed its flowering season; it is a less abundant and smaller tree than the last mentioned, but more beautiful, with brighter green and denser foliage, clear papery light-coloured bark, the whole forming a more picturesque mass.

"Along the north-east and exposed ridges only grow the *R. Falconeri*, in foliage incomparably the finest."

Dr. Hooker found eleven kinds in the district which he explored, but of these, one was the *R. barbatum* of Wallich, a species already known and introduced to England, and proved to be capable of bearing our ordinary winters in the climate of Chester; and another was the original *R. arboreum* of Smith, a kind so mixed up in our gardens with the various hybrid or cross-bred races to which it has given rise, as to be now seldom recognised. We now only give an abbreviated abstract of the description given by Dr. Hooker of the remaining species.

Rhododendron Dalhousiæ (Lady Dalhousie's Rhododendron).—A shrub six to eight feet high, growing on the trunks of large trees. The branches bear leaves and flowers only at their extremities. The leaves are few, four to five inches long, elliptic-obovate, somewhat leathery, and of a darkish green colour, paler beneath. The flowers grow from three to seven, in terminal umbellate heads, which spread wider than the leaves. The blossoms are bell-shaped, very large, three inches and a half to four and a half long, and as much across the mouth, white, with an occasional tinge of rose, very fragrant, the odour partaking of that of the lemon. The flowers in age become more roseate, and are sometimes spotted with orange. This is the noblest of the Rhododendrons. Native of Sikkim-Himalaya, at an elevation of from 7,000 to 9,000 feet; growing on the trunks of large trees. Flowers from April to July.

R. lancifolium (lance-leaved Rhododendron).—A shrub six to eight feet high, with spreading tortuous branches. The leaves are produced chiefly at the ends of the branches; they are three to four inches long, oblong lançe-shaped, very pointed, and of leathery texture, green above, tawny beneath. The flowers grow in dense heads at the ends of the branches; they are of moderate size, bell-shaped, distinctly net-veined, and of a rich puce colour. Native of the interior: Sikkim-Himalaya. Flowers in May.

R. Wallichii (Dr. Wallich's Rhododendron).—A shrub growing from eight to ten feet high, with rugged tortuous branches. The leaves are mostly confined to the apex of the ultimate branches; they are three to four inches long, almost exactly elliptical, full green and glabrous above, paler beneath, and having a remarkably neat appearance.` The flowers are large and handsome, growing in terminal heads, having six to eight in each; they are rosy lilac with deeper rose-coloured dots within the base of the upper lobe; they are bell-shaped, with a spreading five-lobed limb. Native of the interior of Sikkim-Himalaya. Flowers ——?

R. Campbelliæ (Mrs. Campbell's Rhododendron).—A tree growing frequently to the height of forty feet, forming a large spreading mass. The leaves are oblong-lanceolate, acuminate, leathery, green and smooth on the upper surface, and clothed beneath with a more or less deeply rufous or ferruginous tomentum. The flowers grow in dense compact heads, and are of a rich rosy-scarlet colour, spotted at the base of the upper lobe with dark spots, and around the bases of the remaining lobes with paler rosy spots. Native of Sikkim-Himalaya, frequent, growing at an elevation of from 9,000 to 10,000 feet. Flowers in April and May.

R. Roylii (Dr. Royle's Rhododendron).—A small shrub with oval or elliptic leaves, three to four inches long, clothed beneath with an ochraceous-brown pulverulent substance. The flowers grow from four to eight in a loose head; they are campanulate, with a slightly spreading limb of five rounded lobes, ending in an acute point; the colour is brownish red, the lobes of the limb just tipped with bluish green; in its unexpanded state the corolla is iridescent with blue; the tube of the corolla is striated within. Native of Sikkim-Himalaya, on the mountains of the interior. Flowers in April and May.

R. cinnabarinum (cinnabar-leaved Rhododendron).—A small shrub with slender tortuous branches, bearing leaves from two to three inches long, of an acutely ovate-lanceolate form, green and glabrous above, and beneath often reddish and dotted with little scales. The flowers are small, funnel-shaped, with five spreading rounded acute lobes; they grow in small compact heads, and are of a cinnabar colour. Native of the " Sub-Himalaya mountains, interior of Sikkim." Flowers in April and May.

R. elæagnoides (oleaster-leaved Rhododendron).—A small much-branched shrub, with small obovate-trapezoid leaves, covered with minute silvery leprous scales; these leaves are a quarter of an inch long, plane, leathery. No examples of this curious little species were found in flower. It is a little alpine, growing in the vicinity of the snow; and is "apparently single flowered, and calyculate." Native of the mountains of Sikkim-Himalaya, at an elevation of from 14,000 to 15,000 feet.

R. argenteum (silvery Rhododendron).—A fine tree growing thirty feet high, with spreading branched trunks. The leaves are very beautiful in the young state, enveloped at first in pinkish-brown scales, which are so large and closely imbricated as to resemble the cones of some species of pine; at first the leaves are erect and silky; when mature they are very large, six inches to a foot long, obovate-oblong, leathery, green above and silvery-white beneath. The flowers grow in large terminal heads; they are broadly campanulate, two to three inches long, with a limb of five short bilobed segments, spreading, two to two and a half inches in diameter; they are always white, unspotted, very handsome, and only second in size to *R. Dalhousiæ*. Native of Sikkim-Himalaya: summit of Sinchul, Sirradah, and Tonglo, at an elevation of from 8,000 to 10,000 feet. "On Sinchul, the higher parts of the mountain, at from 8,000 to 9,000 feet of elevation, are more or less clothed with it: on Tonglo, as it approaches 10,000 it is suddenly replaced by *R. Falconeri*."

R. Falconeri, Hooker fil. (Dr. Falconer's Rhododendron).—A fine tree growing thirty feet in height, the trunks often two feet in diameter, the branches few and spreading. The young leaves are clothed with velvety down, and when in the bud are concealed by downy glutinous scales. When perfect, they are from eight inches to a foot in length, obovate-elliptic and obtuse, very coriaceous, glossy green above, and beneath, except on the thickly-netted veins, clothed with a dense pale-ferruginous down. The flowers grow in heads of moderate size, but composed of numerous rather small but densely placed flowers, which are white, bell-shaped, with a limb of ten rounded lobes. One of the most striking and distinct of the genus. Native of Sikkim-Himalaya; summit of Tonglo, at an elevation of 10,000 feet.

R. Hodgsoni, bush from twelve to twenty feet high; large leaves, silvery beneath; flowers pale rosy-lilac, eight to ten-lobed and inclose heads.

R. Aucklandii.—Noble species, four to eight feet high; leaves large; flowers white, veiny, tinged with pink, broad and shallow. (Synonym, R. Griffithii.)

R. Thomsoni.—Bush, eight to fifteen feet high; leaves broad, flat; flowers campanulate, and of a deep brilliant blood-red colour. Magnificent species.

R. candelabrum.—Bush; flowers sulphur-coloured, edged with rose. A variety.

R. Edgworthii.—Fine shrub, medium size, often pendulous from trees or rocks. Leaves large; flowers large, white, two or three together.

R. barbatum.—Tree, forty to sixty feet high. Flowers rose-coloured, in compact heads. *R. lancifolium* is a variety of this species.

R. glaucum.—Handsome shrub, two feet high. Leaves small; flowers a bright rosy-pink, in large clusters.

R. pumilum.—Smallest of these Rhododendrons; very neat. Roots among moss, growing three to four *inches* high. Flowers on long stalks, rich pink.

R. æruginosum.—Shrub, four feet high. Leaves blunt; flowers lilac, in large heads.

R. Wightii.—Handsome shrub, ten feet high. Leaves large, flat; flowers pale yellow, spotted with red, in large heads.

R. lanatum.—Shrub, the young wood covered with a white cottony appearance. Flowers sulphur, spotted with red.

R. fulgens.—Shrub, four feet high. Leaves broad, woolly beneath, purplish; flowers rich blood-red, in close round heads.

R. campylocarpum.—Bushy, six feet high. Leaves short, broad; flowers pure sulphur, without spots, in large heads. Charming species.

R. Maddeni.—Fine shrub, six to eight feet high. Leaves sharp-pointed, bright rusty beneath; flowers white, long funnel-shaped, in heads of three or four together.

R. camelliæflorum.—Small slender shrub, pendulous from trees or rocks. Leaves brown beneath; flowers white, two or three together, resembling a single Camellia.

R. pendulum.—Small pendulous epiphyte. Flowers white, two or three together.

R. salignum.—Pretty shrub, two to four feet high. Leaves narrow; flowers yellow, spreading, and shallow.

R. virgatum.—Small shrub, glabrous, four feet high. Flowers small, purplish-red.

R. triflorum.—Shrub, four to six feet high. Flowers greenish-yellow, in three's together. A variety of the last.

R. nivale.—Small depressed shrub, spreading half-a-yard or more. Leaves small; flowers rose-coloured. It is very fragrant, resembling the Eau de Cologne.

R. setosum.—Elegant plant, nearly a foot high. Leaves leathery; flowers borne in profusion, a lively rose-purple colour. It is much like Rhodora in appearance, but has brighter flowers, and leaves Box-like. It diffuses a strong aroma for some distance around.

The introduction of this fine race of *Rhododendrons* is truly valuable, and no doubt, in a short time, all the principal gardens and grounds of the nobility and gentry in this country will be enriched and ornamented with them.

NOTES ON NEW OR RARE PLANTS.

Acacia Cycnorum. Swan River Acacia.—Mr. Bentham has, in his valuable *Memoir on Mimoseæ*, enumerated no less than 340 species in the first volume of the " London Journal of Botany," published in 1842; and many have since been added. These he has divided into six series, and those into sections. Of these, the first three series containing 228 species, belong to Australia, and of them 204 are phyllodineous species, that is, they have the leaves reduced to leaf-like petioles. The third series of the genus, "Pulchellæ," is characterized by being "*unarmed*, or furnished with spines," there are eleven species here included, and *A. Cycnorum* is one. It is a handsome growing shrub, from two to three feet high. Leaves bipinnate. Flowers in globe shaped heads, produced numerously along the branches, of a deep yellow colour. It is a charming species, deserving a place in every greenhouse or conservatory. Messrs. Lucombe, Pince, and Co. obtained seeds from the Swan River settlement, and have plants of it. (Figured in *Bot. Mag.*, 4653.)

BRACHYSEMA LANCEOLATA. LANCE-LEAVED.—Is a native of the Swan River, plants of which are in the establishment of Messrs. Lucombe, Pince, and Co. It is a handsome shrubby plant, having silky branches. The flowers are produced on sub-compound *racemes*, they are of a rich scarlet, with the margin of the vexillum white, red at the disc, with a large yellow spot in the centre. Each pea-like blossom is an inch long, and being produced in profusion renders it very ornamental, and deserving a place in every greenhouse. (Figured in *Bot. Mag.*, 4652.)

CYCLAMEN ATKINSII.—Mr. Atkins of Painswick has, for many years, paid much attention to this lovely family of flowering plants, and possesses an extensive collection of them, which he is yearly increasing by raising seedling varieties. The present variety C. Atkinsii was obtained by a variety of *C. coum* being impregnated with *C. persicum*. It has the neat habit of *C. coum* or *C. vernum* and the *colour* and larger petals of *C. persicum*, having at the same time the foliage dark, yet relieved with a lighter band, or marbled. Amongst the seedlings, Mr. Atkins states, that every plant deviating in the marking of the foliage from the seed-bearing parent, produced white, or blush flowers, whilst those retaining its plain dark leaf, have invariably bloomed with different shades of the colour of that species. The blossoms of C. Atkinsii are elevated on longish stalks, of a French-white, marked with a deep crimson blotch at the base of each segment. They are not fragrant. (Figured in *Magazine of Botany.*)

CYCLAMEN IBERICUM.—Leaves *flat heart*-shaped, of a deep green, with an irregular heart-shaped belt of pale greyish green, at some distance from the edge of the leaf. The veins are *sunken* on the upper face, *prominent* and green beneath, on a dull reddish-purple ground. The flowers vary in colour, in some pale rose, or flesh-colour, in others, a deep rose, and in some white, but in all cases they have five purple bars or spots in the front view. (Figured in *Magazine of Botany.*)

DENDROBIUM FIMBRIATUM; VAR. OCULATUM. THE DARK-EYED FRINGED DENDROBIUM.—A stove Epiphyte orchid, from the East Indies. In our collections (in England) there are two distinct varieties of this most beautiful flowering plant; one has *whole coloured* flowers, of a rich apricot-yellow colour; and the other is of a similar colour, but has in addition a large deep rich pitch-brown spot in the middle of the lip. This latter, now figured, is sometimes known under the erroneous name of *D. Paxtonii* which is a two-flowered species. The one now figured bears numerous flowers in a long raceme, twelve blossoms are given in the plate inserted in " Paxton's Flower Garden 84," and only a *part* of a raceme is given, Each blossom is three inches across. The lip is large, and its margin beautifully fringed. It merits a place in every collection of Stove Orchids

Gastrolobium pyramidale.—Mr. Drummond sent seeds of this handsome flowering shrubby plant, from the Swan River colony to Messrs. Henderson, of Edgware Road. It forms a neat shrub, growing in a pyramidal form, four or five feet high, but by pruning can be easily kept a lower bushy plant of any size desired. The flowers are produced in what may be considered broad pyramidal spikes, or racemes, which are composed of large lateral heads of blossoms, three heads arising in a whorl where the leaves are, and each head upon a footstalk nearly two inches long. Each whorl of three such heads of beautiful pea-formed blossoms, and successively along the branches, render the plant very ornamental. The flowers are of a rich orange-yellow marked with crimson; and the keel a dark maroon. A single blossom is half an inch across. It is a profuse blooming plant, deserving a place in every greenhouse, and will be valuable for an exhibition specimen. (Figured in *Magazine of Botany.*)

Helleborus atrorubens. The dark purple Hellebore.—This is sometimes called the purple Christmas Rose. It is a native of Hungary, a hardy perennial, found there growing in the woods and thickets. In our own country it blooms much more beautiful when in the greenhouse, than in the open air. In the open air it blooms in March and April. The stem is about half a yard high, and produces its branches by two or three series of forkings. The flower-buds are of a deep black purple. The open blossoms a violet-purple, with the edges and centre green. It soon becomes a dingy-green. Each blossom is about three inches and a half across. It is perfectly hardy, and a pretty spring blooming ornament. (Figured in *Paxton's Flower Garden.*)

Medinella Sieboldiana.—A native of the Molucca Islands, from whence it was obtained by Mr. Van Houtte, to the Belgian Gardens, through whom it has been received into this country. It forms a handsome stove shrub, three to four feet high. The flowers are produced in a thrysoid drooping panicle, of a pale rose colour. Each blossom about three parts of an inch across. (Figured in *Bot. Mag.*, 4650.)

Podocarpus neriifolia.—A native of Nepal, it is a shrub, of the order of Yews (Taxineæ). It is grown in the greenhouse in the Royal Gardens of Kew, but it very probably would bear the open air if trained against a wall. The receptacle of the fruit is showy and beautifully adorns the branches, from a pale yellow-green they become orange-red, at length deep purple; at its end it bears an oval glaucous green seed. (Figured in *Bot. Mag.*, 4655.)

Trechopilia suavis. The Sweet.—An Orchid from Central America, which Messrs. Lucombe, Pince, and Co. have obtained, and upon a light ground, with a white tip, very handsome; dwarf grower and free bloomer.

E. Beaumontiana.—Bell-shaped, smallish size, flesh colour; pretty.

E. Linnæoides superba.—Tube one inch, purple below, and the rest white, in profusion; neat and pretty.

E. cistifolia.—Small flowers, white, with black anthers; very pretty; ought to be in every collection.

RHODODENDRON JAVANICUM.

Many of the readers of this Magazine, no doubt, have seen in bloom at the Chiswick, Regent's Park, and Surrey Gardens shows, plants of these magnificent and very handsome introductions. They are natives of Java, where they are found growing on the high volcanic mountains. The R. Javanicum is partly an Epyphite in habit, growing occasionally on the decayed trunks of trees, at other times on the sides of mountains, in a rich vegetable deposit intermixed with spent lava from the volcanos. There it will attain, occasionally, to the height of six feet, becoming a spreading bush.

In 1848 seeds were received in this country from Java, and a quantity of plants were raised. The seedlings require careful attention the first year, but afterwards the plants grow as freely as the general kinds of Rhododendrons, or Indian Azaleas. They require to be grown in sandy peat, well chopped into pieces, and if not sandy enough, a portion of the usual silver sand must be sprinkled amongst it, as well as a few pieces of broken stones or pebbles being intermixed. A *very liberal* drainage must be given, and care must be taken not to overpot the plant.

Messrs. Rollisson, of Tooting Nursery, have a very extensive collection of these plants, where they bloom most admirably. Their mode of treatment is given in an interesting article communicated from their establishment by Mr. Buckley, and inserted in the *Magazine of Botany* for last month. He observes,—

"When the young shoots are fully developed, and the leaves have arrived at their full size, and are beginning to harden, remove the plants to an airy greenhouse or cold pit, where they may remain through the winter; if placed in the latter, give air daily, according to the weather. Keep the foliage dry, and supply water very sparingly to the roots. In the spring, as soon as the plants show symptoms of growth, place them in a house where the atmosphere is kept moist, with a temperature of 55° to 60°, or 5° higher in the sun; sprinkling them daily with tepid water,—three times a-day, in bright sunny weather, will not be too often. They may remain in this situation till the end of May or beginning of June; and they should then be plunged up to the rim of the pot in an open border, where the sun can shine fully upon them; the spaces between the shrubs of an American border will be found suitable, provided they do not crowd too near. The attention now required will be to keep them well watered in dry weather. The leaves will soon acquire a fine glossy surface, dark colour, and a leathery consistency; and if the season is mild and showery, they will not unfrequently make a second growth out of doors, and set flowers on the shoots so produced. The plants may remain in the open border until the month of September, or later if there is no appearance of frost, when they should be placed in a cold greenhouse for the winter as before.

"When the flower-buds are beginning to throw off their numerous scales, preparatory to opening, place the plant at the warmest part of the house; they will expand all the better for it, especially if it be early in the season. By this method as many as twenty flowers have been produced in one head, all perfect, the individual flowers measuring exactly two and three-quarters inches across, of a rich orange-yellow, and of remarkably firm texture: the entire head formed a globular cluster, upwards of two feet in circumference, which continued in perfection more than a fortnight. The probability is that much larger heads may be obtained, as this was from a seedling of only three years' age.

"There is a variety of *R. Javanicum*, with long lanceolate leaves, which vary in size exceedingly on the same plant, being from two to five inches in length, and from half an inch to two inches in width at the widest part; it is from the same locality as the broad-leaved sort, and of much slower growth, but has not yet flowered.

"Although among the recently-introduced Sikkim Rhododendrons there are many splendid kinds, it is remarkable that *yellow* is a scarce colour among them. *R. lanatum*, *R. Wightii*, and two or three others, are of a straw colour, and *R. lepidotum* is described as having flowers of a dark yellow, but here the heads are small, and the habit is weak. Hybridists must therefore look to *R. Javanicum* for a new race of *hardy yellow* hybrids. That these will be obtained, no one who is at all conversant with the history of our hardy scarlet sorts can for a moment doubt; directly, or indirectly, these have all been obtained from *R. arboreum*, some partaking of the character of trees, and others flowering freely when less than a foot in height. The hardy scarlets at the present time amount to upwards of thirty sorts. For the purposes of the ornamental planter, the importance of having a new and distinct colour, for grouping in clumps, or planting in the American border with the sorts already in cultivation, can scarcely be overrated.

"Whether *R. Javanicum* will eventually prove hardy it is difficult to say; but if not, its progeny most assuredly will be. It has already been made to produce seeds in this country, hybridised with several leading hardy sorts, and the young plants have passed through the first six months of their existence. *R. Zeylanicum*, *R. Rollissonii*, and *R. cinnamomeum*, were treated as greenhouse plants for very many years, but it is now satisfactorily proved that they are as hardy as the common kinds, at least in the neighbourhood of London; the foliage is also much finer than when kept in-doors. *R. cinnamomeum* sets its flower-buds abundantly when planted in the open border, and if taken up and potted late in the autumn, or early in spring, makes a showy conservatory ornament, to be returned to the border after blooming. *R. Dalhousiæ*, as a parent, appears to promise flowers of extraordinary

TWENTY-SEVENTH ROW.

1 Triomphe Royale.
2 Parmegiano.
3 Pompe Funebre.
4 La Vandikken.
5 Pompe Funebre.
6 Parmegiano.
7 Triomphe Royale.

TWENTY-EIGHTH ROW.

1 Lord Lyndhurst.
2 Marcellus.
3 Jenny Lind.
4 Mentor.
5 Rose Magnificent.
6 Marcellus.
7 Lord Lyndhurst.

TWENTY-NINTH ROW.

1 Solon.
2 La Belle Nannette.
3 Gibbons's Venus.
4 Fine Bizarre, from Polyphemus and Leopold.
5 Gibbons's 51.
6 La Belle Nannette.
7 Solon.

THIRTIETH ROW.

1 Amadis.
2 Pandora.
3 Duke of Devonshire.
4 Zaill's John Waterson.
5 Lord Strathmore.
6 Smith's Sir Robert Peel.
7 Amadis.

THIRTY-FIRST ROW.

1 Lady Louisa.
2 Leonidas.
3 Clark's Clio.
4 Violet Quarto.
5 Queen Victoria (Greig).
6 Leonidas.
7 Lady Louisa.

THIRTY-SECOND ROW.

1 Sheet Anchor.
2 Lady Crewe.
3 Lady Flora.
4 Tyso's Polydora.
5 Prince Albert (Gibbons).
6 Lady Crewe.
7 Sheet Anchor.

And so on.

"Now, putting R for rose, B for byblœmen, and Z for bizarre, the inexperienced grower will see by the table underneath, a representation of the lines of unbroken colour in a bed so arranged.

	23rd.	24th.	25th.	26th.	27th.	28th.	29th.	30th.	31st.	32nd.
1.	Z	R	B	Z	R	B	Z	R	B	Z
2.	R	B	Z	R	B	Z	R	B	Z	R
3.	B	Z	R	B	Z	R	B	Z	R	B
4.	Z	R	B	Z	R	B	Z	R	B	Z
5.	B	Z	R	B	Z	R	B	Z	R	B
6.	R	B	Z	R	B	Z	R	B	Z	R
7.	Z	R	B	Z	R	B	Z	R	B	Z

The effect thus produced is truly beautiful, and all who have seen it carried out with judgment, must admit that it heightens in an eminent degree the attractions of even a first-rate collection.—*William Harrison*, *Midland Florist.*

[We extracted a part of Mr. Harrison's former Article on this subject, which appeared in our May Number, and as it is intimately connected with the present one, we extract this portion in reference to arrangement, from his judicious remarks.]

FORMATION OF A FLOWER GARDEN.

BY A PRACTICAL MAN.

Laying out flower gardens, that is, fixing the boundaries and arranging the beds and borders,—grouping the trees, shrubs, and herbaceous plants,—together with tracing the walks and disposing the buildings, ornaments, or other features,—requires as much taste and judgment as is required in the cultivation of the plants.

Many of us have read of the elaborately-designed flower-gardens of Italy, France, and Holland, during the sixteenth and seventeenth centuries. Right lines, right angles, and regular geometrical figures, then prevailed; and lest these should not be complicated enough, all kinds of fret and scroll work were imitated on smooth turf, or on a surface of gravel, therein forming beds of the most tortuous and whimsical character. This style was introduced into the royal and many noblemen's gardens in Britain, but almost entirely disappeared soon after the commencement of the last century. This was succeeded by a new scheme, the leading character of which consisted in irregular dispositions, and indiscriminate intermixture of trees, shrubs, and herbs, arranged without order in clumps and groups, bounded by waving lines. This new fashion of irregular planting was not only adopted in flower gardens and pleasure grounds, it was transferred to the park also; and in this style the greater number of the country seats in this country appear at this day; and although it has been the reigning taste for above this hundred years past, it has not escaped censure. The accurately-cut edges of the walks and clumps, were said to be hard and too obtrusive, making the line between the plants and turf too distinct. Box edgings were equally objectionable, as they formed no softened intermediate link between the turf or gravel and the trees. These defects were partly done away with, by giving up digging the clumps, and allowing the turf to flow in among, and be lost under, the plants. The edgesof the walks, too, were beaten down almost level with the gravel, which took off from the ditch-like appearance of the walks.

Professional men have shown themselves indefatigable in carrying on a history of landscape gardening, describing its changes, recording the merits of the various styles, as well as pointing out their defects, with the laudable view of defining the taste, and fixing the execution upon something like sound principles. With respect to flower gardens, Mr. Loudon recommended the old French style, in certain situations,—that is, where the flower-pots are *looked down* upon from a terrace above; because if plots are designed and displayed in very elegant forms, and regularly disposed with respect to each other, their elegance of design and variety of outline are lost, unless seen from an elevated station. And all this, he thinks, is perfectly consistent, because a flower garden, being a confessedly *artificial* creation, every device, every mark of art is admissible, in order to interest and enhance the beauty of the scene.

On level grounds, or that which is nearly so, he advised to *keep up* the artistical character of a flower-garden, by disposing all the plants in circular beds, each of these containing a group of one species or family; and to give variety, making the circles of different sizes, varying from eighteen inches to six feet in diameter; and as another source of variety, placing the circles singly, or in larger or smaller masses or *constellations*, as he calls them. In one place a large circle may be surrounded by several small ones: or, where a thicket may be required, two or three large circles may be irregularly fringed, with a number of various sized ones, always observing that no two circles be nearer together than two feet. As these circles may be variously disposed on the turf, there would be no sameness in the composition, and much variety, both of form and foliage, would be the result. If squares were used instead of circles, more variety might be given; but as angles cannot be so well concealed by planting, the curving outline of circles are to be preferred.

As the tallest growing plants would always occupy the centres of the circles, and the others according to their stature would be graduated down to the edges, the whole might be supposed to appear like an assemblage of distinct tufts or cones of foliage. But this would be no more offensive to the eye than what is commonly called a *hanging wood*, which is universally admired in sylvan scenery, from the numerous catching lights reflected from such a surface.

The adoption of this style, for giving pleasing features to a flower-garden, affords facilities to the flower-gardener for grouping his plants, and in choosing just such sized beds as will contain his stock of plants, whether perennials, biennials, or annuals. Single trees of compact form, and ornamental, may occupy the centres of some of the larger circles; and these may be accompanied by shrubs of similar foliage and form, and from the diversity of tints and manner of leafing of the different groups, if judiciously associated or dissociated by the planter, much of the beauty of the garden will arise.

A full breadth of lawn in due proportion to the area of the garden should be preserved, and which, from the shape of the beds, would have an exceedingly varied outline, advancing or receding from the eye, from whatever point it may be viewed.

Gardens, which have been laid out in this manner, it is said, have a very fine effect; and though recommended by Mr. L. for flower-gardens, he guards himself against it being supposed that he would recommend the same style in planting a park, lest it should cause the reintroduction of the odious feature of *round clumps*, which disfigure so many of our modern parks, and which have been deservedly condemned.

THE DISTRIBUTION OF EVERGREEN TREES, SHRUBS, &c.

BY J. DENNIS, B.C.L.

If yews be planted in proximity to a mansion, for the sake of valuable shelter from bleak winds, they should not assume a prominent position, but should be interspersed with groups of Weymouth pine or bay, and be faced with laurels of luxuriant growth. By such contrast, the gloom of their dingy leaf is relieved with vivid and glossy green; or, if the contrast appear too strong, it may be mellowed by blending Portugal laurel in an intermediate position. In short, the recommendation cannot be too frequently reiterated, to substitute a studied assortment of tints for tasteless indiscriminate admixture. Let but the pictorial artist be permitted, or the amateur condescend, to transfer his principles of taste, the one from his easel, the other from his gallery, to occasional superintendence of English landscape-gardening, and he would contribute to the production of a living vegetative picture, constituting incalculable improvement in style, and commanding inevitable commendation from the spectator of cultivated taste. Nay, pleasure-grounds thus constructed would excite universal admiration, and impart universal gratification. Picturesque effect, copying and harmonising with natural scenery, elicits pleasurable emotions, even in such as "know not why, and care not wherefore." But, for accomplishment of such an important *desideratum*, science must be suffered to acquire unlimited confidence, in exercise of control; while prejudice must cease to plead for senseless "custom, more honoured in the breach than in the observance." An individual proprietor, or a public association, might rest assured of the anticipation of a result decidedly warranting the experiment.

In resumption of the topic of evergreen trees, for formation of a foreground, it may strongly be recommended, while collecting perennial foliage of every species, to permit each variety of the beautiful Holly to predominate. Single or combined, from elegance of shape, delicacy of leaf, and duration of mantling, the Holly constitutes an embellishment almost unparalleled, yet too frequently neglected. Of faster growth than the deciduous oak, it attains expansion competent to the gratification of the planter's eye, with not less certainty, in the ordinary calculation of life's duration, than to please and profit posterity. It should, then, on various accounts, abound in the proximity of a decorated mansion, blended with masses of bay, backed by cypress, yew, and pinaster, and faced with laurel, laurestinus, Portugal laurel, privet, phillyrea, arbutus, with other flowering or variegated shrubs.

In similar relative situations, but in prominent advance from trees and unblossomed shrubs, flowering evergreens should invariably rank. Defying "the icy fang and churlish chiding of the winter's wind," the gay, cheering, precocious laurestinus anticipates the lingering arrival of an English spring. Tenacious of florage and permanently retentive of foliated decoration, it is entitled to numerical predominance over every blossoming shrub. By seasonable intervention and flowering profusion, it compensates for temporary diminution of ornament, in other component ingredients of a shrubbery, thus transferring to nipping winter's gloom the exhilarating semblance of summer's embellishment. Productive of such interesting impression in pleasing the eye, it certainly merits conspicuousness by prominent position.

The arbutus is a shrub peculiarly elegant and eligible, from perennial decoration, rapid growth, and superior beauty in shape and tint of leaf, from delicate blossom, and glowing berry. If suffered to remain unpruned, by gaining height, it becomes hollow and leafless beneath, retaining, like other evergreens, only two year's leaves, except about midsummer, when the third year's are annexed, some weeks previous to the decay of the first. If not surrounded by evergreens more stunted in growth, for concealment of its lower leafless branches, it should biennially be deprived of a few long shoots, by application of the pruning-knife, the shears being calculated to render a shrub hideously cabbage-poled. Any shrub judiciously pruned will retain resemblance of its natural form. Artificial treatment should be studiously disguised, and interposition of control be invariably concealed.

The phillyrea presents striking contrast to the gay or gaudy display of flowering shrubs, being characterised by singular chasteness and unobtrusive simplicity. It is of intermediate tint, diminutive leaf, and moderate growth; consequently is precisely adapted to an advanced position. It will there present a striking contrast to the imposing glare of variegated shrubs, whether holly, aucuba, or others of similar class. Here, too, that lowly, yet cheering harbinger of spring, the mezereon, should rank, interspersed with contemporaneous masses of hepatica, snowdrop, crocus, red daisy, and other vernal flowers, protected by a wicker fence. The cypress is adapted, by its taper form and elevation, to relieve a structure. The pyracantha, pomegranate, trumpet-pomegranate, white jessamine, but, paramount to all, the elegant tamarisk, supply ornamental covering to a wall. In a sheltered nook, even these may be surpassed by the beautiful single-blossomed myrtle. From mildness of climate, it abounds in Devonshire, perhaps in no instance so luxuriantly as in a garden of Mr. Necks, curate of King's Kerswell, where it acquires considerable size detached from a wall, as well as height when attached. The front of a house at Bishop's-Teignton has long been covered to the top by myrtles of forty years' growth, protected from the easterly wind by a wing, and from the westerly by an equal defence, with the advantage of a southern aspect.

THE MANAGEMENT OF EUPHORBIA JACQUINÆFLORA.

BY MR. JAMES PARKES, GARDENER, GROVE LODGE, LIVERPOOL.

I HAVE noticed that this beautiful flowering plant has been often recommended by the Editor in this Magazine, and its blossoms ranking in Covent Garden Market, London, as one of the most strikingly beautiful.

I have several fine plants under my care, and which are grown and bloomed more successfully than any I have seen elsewhere, either in or around London, or the country also. I therefore forward the particulars of my mode of management, and desire it may appear soon, so that the benefit of this season's treatment may be realized by any who please to adopt it.

This beautiful plant I increase by cuttings taken off in March, and planted in light, rich, sandy soil, plunging the pots in a strong hot-bed. I have two methods of culture for this plant. First, when low, bushy plants are wanted, take strong cuttings of well-ripened wood, six inches long, and plant five in a small thumb-pot, having first placed a little moss at the bottom, filling up the pot with pure white sand, plunging in a good hot-bed; in the course of two or three days I water copiously. When the plants have made shoots three or four inches long, I select the two strongest shoots on each cutting, rubbing off all the others. As soon as the two shoots have become firm I cut them back to three eyes each, which causes them to form beautiful bushy plants, taking care to nip off the ends of all straggling shoots till September, when the points are all taken off. The plants are repotted, as the roots appear through the bottom, in a very rich, light soil, removing them to the back bed of the stove, giving water in abundance; by this method bushy plants with drooping, slender branches are obtained. When the plants have done flowering, water is withheld for a week or ten days, when the plants are pruned back to two eyes on each original shoot, and placed in a cool greenhouse or shed. I find if the pruning is delayed, that the eyes at the end of the shoots break first, which causes the long and straggling plants so often seen in collections, whereas, if pruned immediately, the plants are not exhausted. When it is wanted to excite the plants for the following winter, plunge them in bottom heat and supply water, by this method flowers are produced from October to February.

Second method. Take the strongest cuttings that can be got, cut them in lengths each containing four eyes, plant them singly in thumb-pots in rich, light soil, leaving two eyes above the soil; plunge in a good hot-bed, supplying water. When the shoots have attained one inch in length rub off the weakest; when twelve or fourteen inches long, remove to the greenhouse to harden; care must be taken not to break the roots, which will be found, on removal, to have run through the bottom of the pot. Repot them in No. 24, using a good portion of ground bones in the compost; train them singly to sticks. They will not flower much the first season; in April following cut down to two eyes, select the strongest shoot, repotting, supplying plenty of water. Keep them in a warm greenhouse, and with proper management they will be about four feet long and three quarters of an inch in circumference. These plants will flower from February to June, and when they are cut down to one foot high and plunged in the stove, will flower again from the end of August to December, which are then thrown away. By this method the largest flowers are obtained, often in clusters of six or ten at the axis of each leaf from a foot above the pot.

CULTURE OF HOYA CINNAMOMIFOLIA.

BY MR. J. SANTON, OF SIDCUP GREEN, KENT.

This very beautiful species, bears some resemblance to *Hoya Pottsii* but has much more showy flowers, with very large oval-peltate-shaped leaves. It is a native of Java, easy of culture, and merits a place in every stove. With the following mode of management it succeeds very admirably:—Any time in summer cuttings of it may be struck with facility; they should be selected from the young shoots that have grown about three inches long, and if these are taken off with an heel, or close to the older wood, and inserted in a pot prepared with sandy peat, having the pot half-full of drainage with broken potsherds, and plunged in a moderate bottom heat, they will emit roots in about a fortnight. The young plants should be potted off as soon as they begin to grow each into a forty-eight sized pot, using rough fibre peat with plenty of broken potsherds intermixed, and returning them to the hot-bed. The pot recommended may appear rather large, but it is by no means good policy to restrict the food of young plants, for the course is followed by exactly the same results as are visible on the human frame; a stunted or weakly constitution is engendered that probably is never afterwards removed. As regards the application of water, some degree of caution should be employed, as from the commencement, and onwards for several weeks, the plants by being in a moist hot-bed require less than when at a subsequent period they are growing in the stove or hot-house. If the cuttings have been taken off at an early period, say April or May, they will have filled the first pots with roots, and therefore will require another shift in August or September, according to the growth the plants make. I have found a little *leaf-mould*, broken bones, and charcoal, to be very essential to them at this period, mixed with the composts recommended for the first potting, using pots one size larger to serve them for the winter. For a month after this they should be kept in a close pit, where they will get thoroughly established. At the expiration of that time they may be taken to their winter quarters in the stove, where they will require to be kept dry, only giving water once or twice during the winter. Early in spring they should be again repotted, using pots according to the size of the plants. If the plants made good wood the previous summer, they will now require pots at least eleven inches over, using the compost last recommended. A situation where they may have a temperature of about 65 or 70 degrees will make them grow rapidly, and with a little attention to syringing, handsome plants will be formed by the ensuing June, and then a somewhat drier temperature will be required, and a free exposure to the sun; this will induce the production of flowers. The blossoms are borne in umbels from the axils of the leaves near the base of the shoots. It is important to remark, that the pedicels of these umbels are of *long continuance* and bear flowers for several years, the same as happens to H. carnosa, whose flower stems it is well known produce blossoms for several successive seasons; it is therefore of consequence to *preserve* them, and in pruning care must be taken not to cut out any *two years' old wood*, as it is from *this* the blossoms appear, only cutting away such wood as is unnecessary. From the rapid manner in which this species grows, under good treatment, pruning will be required every year, and is best done in the spring when the plants begin to show bloom. As regards the training of these plants it is preferable to allow the stems to ascend perpendicularly, or in a natural manner, till they have attained their greatest height, and then to train them on a trellis in the manner most likely to exhibit the flowers to full view rather than cramp their development by introducing the frame at an earlier period. In training avoid a stiff regularity, which destroys the otherwise easy elegance natural to the plant. While in bloom the specimens may stand in a cool greenhouse, which will prolong their beauty, but at the same time begin to reduce the quantity of water as soon as the flowers are all expanded.

BLUE-FLOWERED HYDRANGEAS.

BY AN AMATEUR.

When the flowers of the Hydrangea hortensis begin to decay, and the wood sufficiently hard enough to endure the weather, I place the plants out in some convenient part of the garden, where I let them remain exposed till the last week in February, or first week in March, when I proceed to pot them for bloom. The compost I use is what I have grown my cucumbers in the preceding year, which consists of half the quantity of good loam, a quarter of good spit dung from an old cucumber or melon bed, and a quarter of decayed leaves. This mixture I lay in the compost yard for use. The Hydrangeas I bloom in a sixteenth-sized pot: I divest the roots of the old mould. From those plants I intend to produce blue flowers, I cut off the long fibrous roots, reducing the ball to the size of a thirty-two sized pot. I take one ounce of oil of vitriol, and, with a quill or strong feather, I touch the roots of two plants all over. The remaining oil of vitriol I mix with a sufficient quantity of mould to pot two plants. When I have potted them, I place them in a shed or some sheltered situation for three or four weeks, until they have made new roots; then I place them in a forcing-house, and take especial care not to let them droop for want of water. The above method I have practised, and without once failing of having them blue for upwards of twenty years. The blue flowers are equally as large as those that are pink.

REMARKS ON THE GENUS TROPÆOLUM,

BY MR. WILLIAM DUBOURG, OF JERSEY.

This very beautiful flowering tribe of plants is not grown in quantity or quality as it is most justly entitled to. And feeling, therefore, wishful to promote its more extensive cultivation, I forward the following observations upon some of the species, trusting my object may be, in some degree realized. If they were better grown (as they can be) in general, they would soon be found in every collection of such kinds of flowering plants.

The geographical range of the Tropæolums is very extensive: from Mexico on the north to Buenos Ayres and Chili on the south; but the tract of country from which we possess the most species is the western slopes of the Andes of Peru and Chili, where the most of them appear to flourish in rocky and bushy places, the borders of woods, &c., where the soil is commonly moist, and the weather cool during the growing period, and where during the summer the heat is powerful, so that the growth of the stronger species is checked, and the production of flowers consequently increased.

This point should be particularly attended to in the cultivation of *T. tuberosum, moritzianum, lobbianum,* and others of *similar habit,* as otherwise in this moist climate the growth is so great that no flower buds are formed until too late in the autumn to expand, and thus we are disappointed with plants of great beauty. But if forward plants of this description are turned out in a poor soil and hot exposure, and kept moist in the beginning of the season, and afterwards left to the natural supply of the atmosphere, a bloom of many months' duration will be obtained, highly rewarding the cultivator for his trouble. The last-named species is one of the most lovely plants grown, either indoors or out, and ought to be one of every collection. It is easy of culture, grows freely, and blooms profusely.

T. tuberosum is seldom seen in flower, and is discarded by many on that account, it is, however, a very handsome species, and if grown according to the hints given above will not be thrown away so readily. I have known it to succeed best and flower most profusely in a pure gravel. Indeed, the whole order will be benefited by care being taken that they do not grow too luxuriantly when free flowering plants are wanted.

Tropæolum tricolor, *T. brachyceras*, and *T. azureum*, succeed well in a good loam, rendered free, but not too light, with sand, leaf-mould thoroughly decayed, and a little peat. Judging from the soil adhering to imported roots of these plants, they appear to grow naturally in a free yellowish brown loam, in which occur glittering yellow particles, I believe, of mica. Peat should be but *sparingly* used, or only *weak plants* will result. Damp must be particularly guarded against, and the freest circulation of air kept up that the weather will permit; but directions like these, and also those respecting drainage, refer with equal force to every plant we cultivate, and of course will always be properly attended to by every one wishing to arrive at anything approaching excellence. I think that when the rarer tuberous-rooted Tropæolums become sufficiently common to allow the experiment being tried, that most of them will be found much hardier than is supposed at present. Plants of Chymocarpus (Tropæolum) pentaphyllus, turned out against a sunny wall, in the course of the summer become very attractive objects, whilst the increase at the root is so great that I really wonder this fine plant is not seen in every cottager's garden. I have little hesitation in saying that most of the tuberous species will do better if planted out near a wall, than if kept in a pot; and most of them seed freely, especially T. brachyceras.

THE CALCEOLARIA.

BY PHILO, OF MIDDLESEX.

During the last three seasons very great improvement in this flower has been effected by the growers who offer them for sale at Covent Garden Market, London. I have long been an admirer and grower of this pretty race of flowers, and I beg to add, that very many of the varieties sold at that market for from one to two shillings each, are equal to any I ever saw of the half guinea priced ones. There is perfection in form, with great beauty and diversity in colour and marking, I think quite unequalled by any other I ever saw. These plants are offered by hundreds, if not even thousands, from the early part of April up to July. I obtained from the most extensive grower who attends that market his method of cultivation. He does not provide his stock of plants for sale from cuttings or slips of the previous years' blooming plants, but raises seedlings every year which bloom the following spring and summer. His system of cultivation is as follows:—

"When my plants begin to bloom, I am careful to select, at an early stage of their blooming, some which produce flowers of the best form, as well as striking distinction in variety of colours. These plants are removed to a low-roofed greenhouse, which is situated a hundred and eighty yards from the house where my general collection is, and I have fine wire blinds at the openings for admission of air, which prevents bees from entering with farina from any inferior-formed flowers. I have only good shaped ones, and each successive year's seedlings produce only fine-formed flowers.

"From such selected plants I save seed, and early in August sow it, placing the pots in a shady situation, in a vinery, care being taken not to allow the surface to become dry, or the small seeds will perish, for when once they are softened by vegetation having commenced, and then allowed to be dry, they are immediately destroyed. Towards the end of September the plants are usually large enough to be potted, into small pots. After being potted I place them in a pit frame where there is a gentle moist temperature, and shade them; here they remain for a week or ten days. when they are removed into a cold pit frame, where they are about a foot from the glass, and can have a free admission of air, as it is only necessary just to protect them from frost. The pit is provided with hot water piping, so that in very severe weather during winter the plants can be protected from injury, either from frost or being too damp. The first week in January I repot the plants, into 48-sized pots, in which they are brought into bloom, and sent to market. If, however, I wanted to have extraordinary sized plants, I should repot again the first week in March, into nine or ten inches wide pots. I give a liberal drainage, and in the following compost they grow very vigorously. One half charred turfy loam, one quarter of rotten leaf mould, and one quarter of turfy peat, with a liberal sprinkling of silver sand, and bits of charcoal. When they are potted in January, I have them placed in the *ashes floor* of the pit frame, where the roots are kept *cool*, which is essential to their well-doing. Air is given on all favourable occasions, to keep the plants in robust growth. About the middle of February I begin to sprinkle the plants overhead with soft water; this is continued during all their subsequent growth till they begin to bloom. Once or twice a week they are syringed over head at first, and as spring advances it is done every day, towards evening. The plant delights in being sprinkled overhead, and to syringe them at the under side of the leaves occasionally is beneficial. Green fly is a great pest to these plants, and on the appearance of even a single insect let the stock be well fumigated. If this is not attended to, deformed flowers and foliage is certain to be the result. When the blossoms begin to expand, I have the roof shaded to keep the sun from shining upon the flowers, and having the plants in a low double-roofed house, similar to a heath house, which has openings on both sides; I give a free admission of air. I am careful to give a liberal supply of soft water at the roots, so that the plants do not flag, for if they do, the flowers shrivel and never regain their firmness or proper form.

"If it is desirable to perpetuate any particular kind, cuttings readily strike, especially towards end of summer and autumn. Such plants never look as well as seedlings of first bloom. These latter are readily raised, seed produced abundantly, and the plants are much handsomer. To raise and grow a stock only by cuttings, never yet repaid any person to supply the London Markets. The difficulties and attention, requisite to perpetuate old plants of this show class of Calceolarias is always extensive, whilst the seedlings, being but for the first season's, bloom, are readily provided, and when done blooming are thrown away to make room for another progeny."

Such is the process, and it claims the attention of every admirer of this lovely tribe of flowers; and how pleasing to attend to the raising of seedling flowers which require so little attention, and when every plant will have fine-formed flowers.

MISCELLANEOUS SECTION.

Horticultural Society's Garden.—Some experiments in regard to killing insects have lately been made, in the plant department. A mixture of Cayenne Pepper and Tobacco has been tried for the destruction of green fly, in the various pits and houses, and although the fumes were so powerful when the structures were filled with them as not to be endured by the operator for more than one or two minutes, and although the fumigating was performed in the evening, and the house shut up close until the following day, yet, on examination after fresh air had been admitted for a few hours, only a few of the insects appeared to have been destroyed. The greater portion of them were in a state of stupor, and after fresh air had been admitted for some time they perfectly recovered. The application did no injury to the foliage or flowers of the plants submitted to it, and its smell is less offensive than that of tobacco. If Cayenne and Tobacco, however, have failed in destroying green flies, Clarke's preparation for killing mealy bug has succeeded perfectly. It has been tried on various plants at different times, and has invariably answered. It must, however, be applied on three or four different occasions, before the plants are entirely freed from insects. None of the plants operated on were in the least injured in the foliage. In the kitchen garden superphosphate of lime, guano, and guano with sulphuric acid, have been tried as manure for Early York Cabbages; but with what result yet remains to be proved. A simple, but in all probability a very important invention for ventilating glasshouses in cold weather, by Mr. Sibthorpe, is in operation in the early Vinery in the experimental ground. It consists of a wooden box about four inches deep, inverted on about half the length of a hot-water tank with which the house is heated. Both ends of this box are open; the external air enters one end through a ventilator, is warmed in its passage along the box on the tank, and is permitted to escape at the other end of this drain into the interior of the house, by which means fresh air is furnished in a warm state, and it will be seen that, if it is desired, it may be easily moistened by having evaporating pans in its course along the tank. Its circulation is so rapid that in a manner it Polmaises the house; therefore, although it has not yet been sufficiently long in operation to test its real value, it is not difficult to foresee the beneficial effects which must result from it.

COMPOST FOR CAMELLIAS.—This season I have seen the most healthy, vigorous, and best bloomed collection of Camellias (several hundreds) I ever saw, not *nearly equalled* by any London nursery collection, or the collections of any private establishment I have seen around London, and I have seen *all* the celebrated ones. Equal parts of turfy loam with all its fibre from a meadow, turfy peat with plenty of fibre, and another part composed of well-rotted decomposed cow-dung, pieces of charcoal, crushed bones, and river sand. These materials were well incorporated together, broken with the spade, but not sifted. A liberal drainage was given, so that the water passed away freely. Such vigour, health, and bloom I never saw elsewhere.—*Clericus.*

COMPOST BEST SUITED FOR HARD-WOODED PLANTS.—Mr. Ayres gives the following particulars relative to this matter in the Magazine of Botany for the last month. He has had considerable experience in plant growing, and his remarks are useful ones.

"*Soil.* This, for hard-wooded plants, consists of peat, procured from upland situations; and, in selecting it, great judgment is necessary, for it is not sufficient to say procure it from Wimbledon Common, Epping, or Wrotham, for though peat of the finest possible quality may be found, it is not unusual to see great rubbish carted from each of these places; therefore select with care, for it is better to spend a few hours in selecting good soil, than in carting home that which is worthless. The best time to procure soil is in the autumn, and it should then be placed in ridges, and in such a manner that while the rain is penetrating the mass, the air has free access between each turf. Thus prepared, it will be fit for use in a few weeks; but if it can be prepared for twelve months before using, it will be so much the better—indeed, those who intend to grow plants properly, must always keep a good stock of properly aerated soil on hand. Peat soils differ in texture; some is hard, as that from Wimbledon and Wanstead, while that procured from Wrotham in Kent, and Spring Park near Croydon, is light and spongy, but very rich. In the light peat, plants grow very vigorously for a time, especially if it is used in a rough state, but it soon gets sour, and the plants die off almost without a moment's notice. In the hard peat, on the contrary, plants grow moderately, but that is poor, and hence, if the plants suffer for the want of water once or twice, the leaves turn yellow, and assume a sickly appearance, from which it is difficult to recover them. I therefore recommend the hard and soft peat to be used in equal proportions, selecting it with the greatest care, and rejecting every portion which does not appear perfectly clean and healthy.

"Break the soil into small pieces not larger than a hazel nut, and pass the whole through a sieve with half-inch meshes, and take care to make every portion pass through. Then add sand and charcoal and potsherds broken small sufficient to secure the porosity of the mass, and have some of the material standing by so that an additional quantity may be added to such plants as require it. Quick growing, soft-wooded Heaths do not require so much sand as the *aristatas*, *oblatas*, and the like. Some of the more free growing New Holland plants will be benefited by having a little nice mellow turfy loam added to the peat and sand. Pimeleas of all kinds, but more especially the fast-growing ones delight in loam, so do Polygalas and Bossiaeas, and even Boronias are not injured by a little of it. Leaf mould I rarely use, not even for soft-wooded plants, as it is full of insects, and unless formed of good clean leaves is rarely what it ought to be.

"The use of rough turfy soil has been carried to a wild extreme, and has caused the death of more plants than any other thing I know of, for though the plants may grow vigorously for a time, the rough soil, as decomposition proceeds, is sure to become a sour soapy mass, in which the roots perish the first time they get a little too much water. Mechanical action, which was the object of the use of rough soil, may be attained in other ways, and it is much better to depend upon potsherds and charcoal broken small and mixed with sand through the mass, to secure porosity, than upon the interstices between large lumps of soil. If the soil is broken small it is the same throughout, and not a stratum of soapy sodden soil in one part of the pots and a sand heap in others, and hence the roots make steady and regular progress.

"Now what is good potting? A few years back we should have been told it consisted of tumbling the soil into pots in as large lumps as possible; but this was an error which I believe most gardeners have learned to avoid. The first requisite in good potting is properly prepared composts; the second, clean porous pots; and the third, soil made as firm as it can be by the use of the fingers and thumb, but without resorting to the ramming system of compression."

THE BEAUTIFUL IN GROUND-SURFACE.—Artists and men of taste have agreed that all forms of acknowledged beauty are composed of *curved lines*. The principle applies as well to the surface of the earth as to other objects. The most beautiful shape in ground is that where one undulation melts gradually and invisibly into another. Every one who has observed scenery where the fore-ground has been remarkable for beauty, must have been struck by this prevalence of curved lines; and every landscape gardener well knows that no grassy surface is so captivating to the eye as one where these gentle swells and undulations rise and melt away gradually into one another. Some poet, happy in his fancy, has called such bits of grassy slopes and swells "earth's smiles;" and when the effect of the beauty and form of outline is heightened by the pleasing gradation of light and shade, caused by the sun's light variously reflected by such undulations of lawn, the simile seems strikingly appropriate.

A flat or level surface is considered beautiful by many persons, though it has no beauty in itself. It is, in fact, chiefly valued because it evinces art. Though there is no positive beauty in a straight or level line, it is often interesting as expressive of *power*, and we feel as much awed by the boundless prairie or desert, as by the lofty snow-capped hill. On a smaller scale, a level surface is sometimes agreeable in the midst of a rude and wild country, by way of contrast, as a small level garden in the Alps will sometimes attract us astonishingly, that would be passed by unnoticed in the midst of a flat and cultivated country. Hence, as there are a thousand men who value power, where there is one who can feel beauty, we see all ignorant persons who set about embellishing their pleasure-grounds, or even the site for a home, immediately commence *levelling* the surface. Once brought to this level, improvement can go no further, according to their views, since to subjugate or level is the whole aim of man's ambition. Once levelled you may give to ground, or even to a whole landscape, according to their theory, as much beauty as you like: it is only a question of expense. This is a fearful fallacy, however: fearful oftentimes both to the eye and purse.

It is not less fearful to see a fine varied outline of ground utterly spoiled by being graded for the mansion and its surrounding lawn, at an expense which would have curved all the walks, and filled the ground with the finest trees and shrubs, if the surface had been left nearly, or quite, as nature formed it. Not much better, or even far worse, is the fancy many persons have of *terracing* every piece of sloping ground—as a mere matter of ornament,—where no terrace is needed. It may be safely said, that a terrace is always ugly, unless it is on a large scale, and is treated with dignity, so as to become part of the building itself, or to be supposed, more properly, to belong to it than to the grounds—like the fine architectural terraces which surround the old English mansions. But little gardens, thrown up into terraces, are devoid of all beauty whatever,—though they may be rendered more useful or available in this way.

The surface of ground is rarely *ugly* in a state of nature, because all nature leans to the beautiful; and the ceaseless action of the elements goes continually to soften and wear away the harshness and violence of surface. What cannot be softened is hidden and rounded by means of foliage, trees, and shrubs, and creeping Vines, and so the tendency to the curve is always greater and greater. But man often forms ugly surfaces of ground by breaking up all natural curves without recognizing their expression, by distributing lumps of earth here and there, by grading levels in the midst of undulations, and raising mounds on perfectly smooth surfaces; in short, by regarding only the little he wishes to do in his folly, and not studying the larger part that Nature has already done in her wisdom.—*A. J. Downing.*

GARDENIA FORTUNI.—This beautiful stove evergreen shrub is deserving of extensive cultivation, as it is doubtless one of the finest plants introduced into this country. It is exquisitely fragrant, and therefore very suitable where fragrant plants are required. Its fine foliage gives it an interesting appearance at all seasons of the year, and it contrasts well during the blooming period with its pearly-white blossoms. There is no great difficulty in the culture of this plant. It may easily be propagated from cuttings of the half-ripened wood, which should be inserted under a bell glass in silver sand: the pots plunged over a hot-water tank in a temperature of 80° Fahr., and, as soon as rooted, potted in three-inch pots in sandy peat. Presuming that the plants are well rooted early in the spring, they should be repotted into five-inch pots, using equal parts of peat, leaf mould, and loam, with a liberal admixture of silver sand, and placed in a warm situation near the glass—the pots partially plunged. About a fortnight after they are potted they should be stopped, and a warm humid atmosphere maintained, ranging from 70° to 90° temperature during the day, according to the amount of solar light, which may be allowed to fall to 60° during the night. As the plants advance in growth more air must be admitted, to induce a robust and vigorous growth. When the young shoots have attained six inches in length, they must be stopped again, and the same treatment pursued as before, till the decline of solar heat renders it necessary gradually to withdraw the stimulus necessary to produce accumulative growth—as bottom heat, &c. The daily winter temperature should be from 60° to 70°, while 55° to 60° is amply sufficient nocturnally during the season of repose. The plants must be potted as they require it, using the materials in a coarser state than previously, to prevent any stagnation of water in the soil, which is highly injurious, causing the foliage to assume a yellowish hue, and a speedy extinction of the vital energies. The flowers are produced on the extremities of the young stock; and their production is dependent, in a certain degree, on the maturation of the wood. After the flowering season is past, they must be potted again, and the strongest shoots stopped to preserve the specimen in a regular form. Great attention must be paid to prevent them from sustaining injury from insects, as on this care much of the beauty of the plant depends. —*Wm. Rumley*, *Chatsworth*. (*Gardener's Journal.*)

NATIONAL TULIP EXHIBITION.—The annual exhibition took place on Thursday, May 27th, at the Town Hall, Birmingham, and brought together a goodly gathering of both flowers and cultivators. The general attendance was also large. About two thousand blooms were sent, and about from thirteen to fourteen hundred were staged. The labours of the judges were, therefore, very onerous, occupying between five and six hours. Thirteen pans were entered for the *gold medal*, so that the competition was a strong one. It was worthily won by T. Houghton, Esq., of Hems Hall, near Nottingham, whose flowers well merited the distinction assigned to them. The pan included well-defined blooms of Coupe de Hebe, Royal Sovereign, and Captain White. The winning pan in class A contained superior specimens of Heroine and Royal Sovereign; the second, of Lord Denman and Queen Victoria; and the third, of Queen Charlotte; Captain White being the only flower worthy of notice in the fourth. The prize collection in class B presented Strong's King and Duke of Devonshire, in fine strain. The pan which obtained the second prize contained good examples of Pilot, Thalia, and the Byblœmen Maid of Orleans; the best flower in the third pan was Princess Royal; the fourth including splendid blooms of Zanzio and Polyphemus. The selection of the Premier Feathered flowers was most judicious; and in the adjudication of the premiums in the other classes for single specimens, equally satisfactory selections were made. Of the Flamed Bizarres, Captain White, Pilot, and Donzelli were in good stain. In the Feathered Bizarres, Vivid ranked very high. Maid of Orleans and General Bournaville (the last named coming from Mr. Hartland, of Tipton) stood at the head of the Feathered Byblœmen class, and deservedly so. The Flamed Byblœmens formed a good class, of which Queen Charlotte was the most noticeable flower. The judges had great difficulty with the Feathered Roses, from the quantity exhibited—Napoleon, a new flower, and Bion, taking the leading prizes in the list. The Flamed Roses were inferior; and in Class F, for Flamed or Beamed Flowers, the entries were of trifling value. The following were the prizes awarded:—The National Tulip Society's Gold Medal, value 7*l.* 7*s.*, for the best six *Rectified Flowers*, one of each class; T. Houghton, Esq., Hems Hall, Nottingham, for Royal Sovereign, Coupe de Hebe, Captain White, Queen Charlotte, Heroine, and Triomphe Royal. Class A.– Six Rectified Tulips, one of each class: 1st prize, Mr. Godfrey, Chellaston, for Captain White, Van Amberg, Royal Sovereign, Maid of Orleans, Heroine, and Triomphe Royal; 2nd, Mr. C. Turner, Slough, for Lord Denman, Arlette, Polyphemus, Queen Victoria, Triomphe Royal, and Royal Sovereign; 3rd, Mr. T. Adams, Derby, for Captain White, Unknown, Queen Charlotte, Heroine, and Triomphe Royal; 4th, Mr. W. Marsden, Derby, for Captain White, Seedling never exhibited, Ambassador, Sarah Ann, Lady Jane Grey, and La Belle Annette. Class B.—Twelve Dissimilar Tulips, four of each class: 1st prize, J. Willmore, Esq., Edgbaston, for Lady Flora Hastings, Strong's King, Clark's Thalia, Earl Douglas, Triomphe Royal, Heroine, Duke of Devonshire, Aglaia, Washington, Waterloo, Camuse de Craix, and Friend; 2nd, Mr. C. Turner, Slough, for Thalia, Madame Vestris, Pilot, Duke of Devonshire, Triomphe de Leslie, King, Claudiana, Maid of Orleans, George Glenny, Polyphemus, and Heroine; 3rd, Mr. J. Edwards, Holloway, for Purple Perfecta, Junius Brutus, Triomphe Royal, Priam, Violet le Grand, Rose Astonishing, General Bournaville, Catalini, Princess Royal, Miss Catherine, Hamlet; 4th, Mr. W. Lymbury, Nottingham, for Captain White, Lord Milton, Donzelli, Lord Sandon. Seedling, Mrs. Lymbury, Mantua, Ducal, Baquet, Prince Eli, La Vandikken, Sarah, Bacchus, and Polyphemus. Class C.—Nine Dissimilar Tulips: 1st prize, T. Houghton, Esq., for Heroine, Abercrombie, Princess Royal, Emperor of Austria, Victory, Queen Charlotte, Royal Sovereign, Triomphe Royal, and First-rate; 2nd, Mr. J. Parkins, Derby, for Walworth, La Bien-Aimée, Diamond, Heroine, Venus, Aglaia, Sovereign, Britannia, and Shakspere; 3rd, Mr. T. Adams, Derby, for Royal Sovereign, Heroine, Maid of Orleans, Pilot, Triomphe Royal, Enchantress, Captain White, Princess Royal, and Cornelius; 4th, Mr. C. Turner, Slough, for Princess Royal, Midland Beauty, Glory of Abingdon, Lady Stanley, Triomphe Royal, Purple Perfecta, Glencoe, Gibbons No. 2, and Albion. Class D.—Best Feathered Flower in each class, selected from the classes.—Feathered Bizarre:

Premier prize, Mr. J. Parkins, Derby, for Charles the Tenth. Feathered Rose: Premier prize, Rev. S. Cresswell, Radford, for Agnes (seedling). Feathered Byblœmen: Premier prize, Rev. S. Cresswell, for Prince of Wales. Class E.—Single specimens—Byblœmen, Feathered: 1st prize, Mr. Thorniley, Heaton Norris, for Maid of Orleans; 2nd, Mr. T. Adams, for Princess Royal; 3rd, Mr. C. Spencer, for Victoria Regina; 4th, Rev. S. Cresswell, for Sarah; 5th, Mr. Ackerley, for Salvator Rosa; 6th, Rev. S. Cresswell, for Kosciusko. Byblœmens, Feathered and Flamed: 1st prize, T. Houghton, Esq., for Princess Royal; 2nd, Mr. Thorniley, for Queen Charlotte; 3rd, Mr. J. Hartland, Tipton, for General Bournaville; 4th, Mr. Parkinson, for Lord Vernon; 5th, Mr. Dixon, for Rubens; 6th, Mr. Astlee, of Derby, for Surpasse le Grand. Bizarres, Feathered: 1st prize, Mr. R. Dickson, Manchester, for Charles the Tenth; 2nd, Mr. C. Thorniley, for Vivid; 3rd, Mr. Parkinson, Derby, for Magnum Bonum; 4th, Mr. R. Dixon, Manchester, for Cobert; 5th, Mr. Spencer, Chellaston, for Chellaston; 6th, Rev. S. Cresswell, for Catafalque. Bizarres, Feathered and Flamed: 1st prize, Mr. Godfrey, for Captain White; 2nd, Mr. W. Artle, Melbourne, for Pilot; 3rd, Mr. Frearson, Nottingham, for Lord Milton; 4th, Mr. J. Edwards, London, for King; 5th, J. Willmore, Esq., for Donzelli; 6th, Rev. S. Cresswell, for Polyphemus. Rose Feathered: 1st prize, Mr. C. Spencer, for Heroine; 2nd, Rev. S. Cresswell, for Napoleon; 3rd, Mr. R. Dixon, for Baquet; 4th, Mr. R. Dixon, for Bion; 5th, Mr. Ackerley, for Anastasia; 6th, Rev. S. Cresswell, for Lady Crewe. Rose Feathered and Flamed: 1st prize, Rev. S. Cresswell, for Vicar of Radlord; 2nd, Mr. Parkinson, for Aglaia; 3rd, Mr. Parkinson, for Triomphe Royal; 4th. Mr. W. Lymbury, for Grand Rose Desire; 5th, Mr. Godfrey, for Triomphe Royal; 6th, Mr. Astlee, for Camilla. Class F.—Flame or Beam: 1st prize, Mr. G. Mills, Alderly, for Holmes's King; 2nd, Mr. S. Lakin, Derby, for Oriflamme; 3rd, Mr. S. Lakin, for Pilot; 4th, Mr. Turner, Slough, for Gibbons's No. 4; 5th, J. Willmore, Esq., for Lord High Admiral; 6th, Mr. Ward, Nottingham, for Duke of Clarence.

To the Tulip Show was added an extraordinary exhibition of plants by the Handsworth and Lozells Floricultural Society, which also proved to be of marked excellence.

SUPERB PELARGONIUMS.—The following varieties exhibited in the collections at the Chiswick, Surrey Gardens, and Royal Botanic Shows, were peculiarly excellent. They are entitled to a place in every collection of this fine race of flowers. Ajax, upper petals purple-crimson margined with scarlet, the lower petals a rich purple-rose. Petals of thick substance and good form. Rosamond, light rose, with a pure white centre, strikingly handsome, and very attractive. Conspicuum, upper petals a rich dark crimson margined with fiery red: lower petals a pretty blush, with a crimson spot on the centre of each; the centre of the flower white tinged with violet, very fine. Magnificent, a vivid crimson-scarlet with large dark blotches. Petals of thick substance and good form. A noble growing variety. Ocellatum (eye-like), upper petals a rich crimson shading off to a pretty rose; lower petals bright pink, each having a dark crimson spot in the middle. Flower, a white centre. A very handsome variety. Nonsuch, upper petals having a small but very dark spot shading off to crimson, and edged with pink; lower petals bright-pink, each having a very striking spot of dark crimson at the middle. One of the most beautifully striking varieties. Mont Blanc, "No. 2," pure white with a small clear scarlet spot on each of the upper petals. Pearl, pure white, with crimson spot on each upper petal. Virgin Queen, pure white, with dark spot on upper petals; fine form. Loveliness, upper petals very rich dark, edged with bright pink; lower petals pink, with a crimson spot on the middle of each. Centre of flower pure white. A very handsome variety. Gulielma, upper petals as well as lower of a plum-purple; the centre white, very striking, and fine. Alonzo, upper petals a rich dark purple edged with scarlet; lower petals a rich rose. Petals of good substance and form. Emily, upper petals a rich velvet edged with crimson; lower petals a deep pink, with a dark spot at the middle of each. Centre white. Very pretty. Prince of Orange, upper petals *bright orange-scarlet*, with a small velvet spot; lower petals a bright scarlet; very distinct and showy. Magnet, the flower is of a high coloured scarlet-crimson, and the upper petals having a large black blotch edged with vivid crimson. Very superb. Star, upper petals large dark crimson blotch, edged with pink; lower petals bright pink. Centre white. Very pretty. Governor, flower a bright rosy-purple, the upper petals having a dark blotch; the centre white. Very showy. These were the best varieties in the collections; distinct, fine formed, and much admired, and worth a place in every greenhouse.

Fancy Pelargoniums.—Gaiety, the flower is of a dark mulberry colour, edged with white; good form. Celestial, upper petals rosy-crimson edged with white; lower petals white, veined with rosy-purple. Defiance, rich dark velvet edged with light, and centre white; fine form. Hero of Surrey, rich dark crimson-velvet edged with white; fine form, and pretty. Triumphant, *bright rosy-scarlet* edged with white; fine form, and very handsome. Caliban, upper petals plum colour edged with light; lower petals mulberry with light edge; fine form. Formosissima, upper petals crimson tinted with violet, and white edge; lower petals white, belted with rosy-crimson; fine form. Aveiron, this year's seedling, upper petals very dark edged with white; lower petals light, with a broad crimson band across the middle of each. Centre white. Fine form, and very pretty. The above are the best of the newest varieties, and merit a place in every collection. There were some of the older varieties which were very fine and showy, such as Jenny Lind, Exquisite, Delight, Anais, Stataiskie, Modesta, and Magnifica.

Mr. Hoyle exhibited twelve of his seedlings in one stand; they were not of the fancy class. Zaria, the ground was a pretty buff-white. Upper petals having a large blotch of deep chocolate; each of the lower petals had a small spot of the same colour. Petals thick; form excellent. Astræa, upper petals very dark edged with white; lower petals rose. Centre pure white. Petals thick, and of fine form. Dion, upper petals dark maroon, with a broad belt of scarlet; lower petals scarlet. Excellent form. Kana, upper petals dark, edged with fiery red; lower petals pink, with a dark spot in the centre of each. Fine form, and very showy. Leonora, upper petals dark, edged with white; lower petals light rose; centre white. Fine form.

Attraction.—This is a new hybrid raised by Mr. Kinghorn, something in the way of his *Flower of the Day*, sent out by Messrs. Lee; it has a beautiful variegated foliage; green is the ground colour, edged with white, but there is a dark-purplish horse-shoe mark divides the green and the white. It is a striking variety, and the flowers are of a salmon-red colour. Kingsbury Favourite, the flowers are very similar to those of Lucia-Rosea, with light green leaves having a dark horse-shoe mark.

PROPAGATION OF THE FANCY CLASS OF PELARGONIUMS.—Mr. Robinson, gardener to J. Simpson, Esq., of Pimlico, London, is a very successful cultivator and exhibitor of this class of plants. The particulars of his practice in propagating them from cuttings he describes in an article inserted in the *Florist*, from which we make the following extract:—

"I know of no better season than the present (February) for taking cuttings. Select some good tops from the very best sorts that are out, get as many thumb-pots as you will require for the purpose, fill them with rich turfy mould, and put one cutting into each pot; but previous to filling the pots, let them be well drained with broken charcoal or oyster shells, either will do. Then with your pencil, or a piece of round stick, make a hole an inch deep, fill the said hole with silver sand, then put in the cutting, and give the pot a slight blow on the potting board, to settle it firmly in the soil; dip a piece of stick, or your pencil into some water, and hold it downwards, in order that three or four drops may fall from the same, close to the side of the cutting; this will set the whole closely together, and the quantity of water will be quite sufficient for three or four days; after that, add a little more in a similar way, or with a fine-rosed watering-pot, as may be thought needful. When you have finished this part of the work, let all the pots be plunged into a slight bottom heat, say from 65 to 70 degrees; give a little air in the day-time, to prevent the cuttings from damping off; and as soon as they are rooted, they are established plants; not like some of the nurserymen's poor sickly things, from which it is impossible to make a specimen fit for exhibition, and which you must grow along in the best manner you can, till you can get a cutting from them, at a great loss of time.

"I do not recommend the practice of putting a great quantity of hard-wooded cuttings into one pot; two out of three will take root, when you spoil several in getting them apart; strong cuttings struck singly in pots, as directed, and well managed after they are rooted, will make fine specimens by June or July the following season. I have exhibited plants in July, two feet in diameter, that were taken off the parent plant shown at Chiswick in July the previous year; but you will not find many of the sorts do this; most of the varieties will, however, make good specimens by the time stated.

CYCLAMEN PERSICUM.—I observe a correspondent complains, that "for several years he has purchased plants *in profuse bloom*, but he never yet succeeded in blooming one well afterwards." He has omitted to inform us how he managed the plant after it had done blooming the season when he purchased it. I beg however to state, that I have grown and bloomed numerous plants of it most successfully during the last four years, not, that I recollect, ever having a single failure.

The plants (five) which I purchased four years ago have been retained in the same pots up to the present time, and the only alteration has been as follows:—As soon as the plants have done blooming, I gradually withhold water, and the tubers go to rest, and are placed on a shelf behind the stage in the greenhouse, where they are kept dry, shaded from the sun, and have a free admission of air. About the middle of September I turn out the ball *entire*, and carefully loosen the crocks which are at the lower portion of the ball and an inch or two of the soil; also take a little of the top part of the ball at the side, but in doing this I do not loosen the roots. A little fresh compost being put into the pot, I carefully place the ball upon it, and add a portion of soil at surface. This being done I give a good watering, the tubers begin to start into growth; water is afterwards gradually given as the plant increases in growth. The flowers soon push forth from the crown *abundantly*. I am careful not to disturb the roots of the tuber, and to retain the plant in the same pot. I find if the tuber has a large pot, it produces too much foliage, and the fewer flowers are borne in proportion.—*Thomas Joyce, St. John's Wood Place.*

THE OLD DOUBLE YELLOW ROSE.—I have a plant of this very fine rose growing on a north aspected border in a good sandy loam, which has bloomed charmingly for the last twelve years, and not failed on any one season. I water it well from the time it begins to push, once a week with strong manure-water till the flowers begin to expand, and where there are several flower-buds near together I thin them. The result of this treatment is fine *large flowers*, well opened and perfect in form.—*An Ardent Admirer.*

ACHIMENES TO BLOOM IN WINTER AND SPRING.—You have often recommended the culture of the strong upright growing kinds in your remarks on the superb plants grown in the Royal Gardens of Kew. I was thus induced to grow some for ornament in the establishment where I am flower-gardener, and through the entire of last winter, up to the middle of May, I had fine blooming plants of Achimenes picta, pedunculata, hirsuta, along with several distinct and handsome varieties of pedunculata. Some of the plants were four feet high, and bloomed most profusely. It was August, 1851, when I resolved to grow some for winter, I had not any tubers in a dormant state, nor young plants, I therefore put off a number of cuttings, and struck them in a hot bed under bell-glasses. I potted them singly in sixty-sized pots—encouraged their growth, and at the latter part of November, I planted out five plants in a shallow pan, six inches deep, and half a-yard across. I had an inch of broken crocks, over which I spread some moss to prevent the soil being washed in among the crocks, I used a compost of sandy loam, sandy peat, leaf mould, and one year old decomposed cow-dung in equal portions, with a liberal sprinkling of bits of charcoal. In this the plants were quite astonishing specimens; I gave one good watering of liquid manure every week, and soft rain-water on all other occasions. Before the flowers opened I used to syringe the plants overhead every day, and the under side of the leaves twice or thrice a week. This prevented the red spider. In placing the plants in the pan, I put one in the centre, and the other four at equal distances from each other. I had a few plants grown in deep pots, but they did not flourish near so well as those in the pans. The roots like to run near the surface. The time to put cuttings off (August or September,) is at hand, and it is well worth attention. Plants raised from cuttings bloom in winter, but plants from tubers being potted in August, scarcely bloom at all. I had a tuber of pedunculata last August, and gave the plant every encouragement, but I could not get the plant to bloom.—*Harleyford House*, *Devon.*

LESCHENAULTIA FORMOSA.—*Young plants* should not be allowed to bloom, for flowering at that early stage, prevents the plants from growing. Pinch off the blossom buds, and the growth of the plants will be rapid. They should always be kept *bushy*, stopping the leads will enhance that. Plants should be kept near the glass, and have a free air. When repotting is necessary, keep the ball entire, so that the roots be not damaged by it, where the soil is free from roots it may be picked out, and its place supplied by new compost. The compost that this plant flourishes in is, one part fibry peat, one part light loam, and one part of well decomposed leaf mould, the whole having a liberal sprinkling of silver sand, bits of charcoal, and broken pot.

A *liberal* drainage is essential to success. As well as the compost being in a rough state, not sifted. In summer keep the plants in an open frame, and place each on a bed of ashes; a liberal admission of air *around* them must be given. Prevent the plants being *drawn* up. If the sun is kept from shining upon the sides of the pots by moss being laid between, each pot may be placed upon a pot turned upside down. The coal ashes, or moss, should be watered every other day in hot weather to keep it cool for the roots. Get the new shoots well ripened by the beginning of September, a full exposure of the tops to sun and air from July is essential to effect vigorous maturity. In winter an airy, *dry* part of the greenhouse is necessary to preserve the plants. Guard against having the soil *dry as dust*, or *soddened* with excess of water. A day or two of such casualties will be sufficient to destroy the plant. The proper medium, *just moist*, must be kept, and a liberal dry air, then success is certain.—*A Foreman of a London Nursery.*

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

JULY is proverbially a hot and dry one, it will therefore be highly necessary, during the continuance of dry weather, to administer copious supplies of water. This should be done towards the evening of each day, because the plants have then time to absorb the water gradually, and appropriate such portion as contributes to their well-being. It is only in extreme cases that water should be given in the morning, because it is then so quickly exhaled from the soil, as well as the leaves, that its refreshing and nutrimental properties are almost wholly wasted. Rain-water is best, or that from an exposed pond or tank. Where beds of plants have been repeatedly watered through a rose, the surface of the soil will probably have become *crusted* and almost *impervious* to moisture; consequently they ought to be stirred over occasionally with a small fork. A few annuals, as Mignionette, &c., may now be sown to bloom in the autumn, also biennials to bloom next year.

FLORISTS' FLOWERS.—*Auriculas* and *Polyanthus* should be kept in the shade. At this season of the year the plants are often attacked with green fly, dip the plants in a solution of tobacco-water. *Tulips* will have perfected their growth, and should now be taken up, as if allowed to remain too long it invariably acts prejudicially on the bulb. *Ranunculuses* will require to be taken up as soon as their foliage has become withered and dry. *Pinks* may still be piped. *Carnations* and *Picotees*: As the pods are fully formed and ready to open, secure them round with a ring of India-rubber, gutta-percha, or bass, to prevent their bursting on one side. When blown, they should be shaded. Never suffer the plants to flag for want of water. Proceed with layering. *Dahlias* will require *thinning out* freely as they advance in growth. If sprinkled overhead with soft water late in the evening with a fine rose or syringe, their luxuriance will be greatly promoted. *Pelargoniums* that have shed their flowers should be cut down, disrooted, and potted in smaller pots, keeping the plants for a week in a close frame, to assist them in developing their new shoots. *Roses* may now be budded, moist weather being best for the operation. It is of importance that there should be a resemblance between the bud and the stock as to the vigour of vegetative growth, in order to ensure a successful result. If a Rose of slow development is budded on a rampant briar, and all the strength of the latter is turned into the parasitical stranger, health cannot be maintained, nor will a freely vegetating Rose submit to be impeded in its progress by a sluggish stock. Thin away surplus branches from all stocks not budded as early as possible, not to wait a day even, but get the branches strong and healthy.

IN THE FORCING STOVE.

Where stove and greenhouse plants afford suitable cutting, propagation must now be pursued; as, generally speaking, it can be practised with the greatest success in the early rather than in the later part of the year. It should be remembered that the propagation of most plants is facilitated by the employment of bottom-heat and bell-glasses. Stove plants will derive great advantage from a partial shading during the glare of the day, and will be less liable to injury from drought. Many plants that will require shifting, such as Justicias, Clerodendrons, &c. Give plenty of water at the roots, syringe often in the evening, and keep the floors of the house and every part damp, to assist in maintaining a humid atmosphere. Bulbs of Amaryllis, &c. should be put together in a pit or frame, where they will be near the glass, and where the influence of the sun, with a gradual diminution of water, will mature them. Never permitting the foliage to flag is a good criterion as to the quantity of moisture plants require, keep as near that state as possible.

IN THE GREENHOUSE, &c.

As a free ingress of air must necessarily be permitted during fine weather, its rapid circulation, conjoined with active solar heat, must cause a rapid evaporation both from the plants and soil; hence there exists a necessity, under the above circumstances, of watering and syringing frequently. However beneficial a screen may be during bright hot sun, its presence is not required while the sun is obscured. Encourage the growth of Azaleas and Camellias by keeping them comparatively close (with shade during sunshine), and supplying them liberally with moisture administered by the syringe. Propagate Roses by cuttings from those plants which have been forced, and place the plants in a rather shady situation, in order that they may have a period *of rest* for a few weeks. Calceolarias that have ceased blooming should be re-potted; cut off dead tops, place the plants in a situation where they can be shaded from hot sun, admitting it morning and evening. Seed should be sown, so as to have the plants strong, to endure winter; such will bloom next season, and be much more vigorous than plants raised from cuttings. Cinerarias also that have done blooming should have the tops cut off, be fumigated in a close frame, as they are often affected with green fly; after which the plants should be turned out of the pots, and planted in a somewhat shady bed of good soil, in the garden. Sow seed now; the young plants will bloom early next spring. Epacrises, Ericas, &c., now done blooming, may be cut in, to render them bushy. The tubers of Tropæolums which have ceased blooming, and the tops withered, must be taken out of the soil, or be kept in a bag, &c., or the pot must be put aside, where it may have the soil kept dry till potting time. Greenhouse plants placed in the open air in pots should have frequent waterings at the under side of the foliage, to destroy or keep down green fly. Moss laid lightly between the pots keeps the roots somewhat cool, and tends to promote the health of the plants. Occasionally water the moss, if the weather be hot and dry.

BRIEF REMARKS.

Opening of Elvaston Gardens.—Whit-Monday was the day appointed for a public view of the unique and beautiful gardens at Elvaston Castle, near Derby, the seat of the Earl of Harrington. The noble Earl, with great condescension and liberality, granted to the friends of temperance at Derby the use of these gardens, under certain restrictions, for the benefit of the funds in course of collection for the erection of the Temperance Hall, now in progress in Curzon-street. An entrance charge of one shilling was demanded, and great preparations were made by the railway companies and others to convey visitors to the gardens at low fares. Unfortunately, the state of the weather was not quite favourable, yet a vast concourse of people were present from different parts of the country. The visitors were admitted through an avenue of trees, and along paths pointed out by guides and printed directions placed at every turn. After passing some distance through shady groves, they were conducted through a portion of the kitchen gardens, and by devious routes, until they arrived at the gardens of the Alhambra, the Mont Plaisir, and Fairstar. Here, wherever the eye turned, a most enchanting scene presented itself. Clipped yews, dressed into various forms, representing columns, pedestals, minarets, &c.—marble statuary of the most costly and antique kind—bowers, and green velvet nap—everything, in fact, that art and the appliances of wealth could accomplish in this particular range, is here to be viewed with feelings of wonder and astonishment. The garden of Mont Plaisir is immediately under the south front of the castle, from the front of which its general expression and singular design are seen to great advantage. It is enclosed on two sides (right and left) by yew hedges, in the form of walls, the sides being quite perpendicular, and the tops cut off as square as if they were pieces of masonry. The central portion is a covered walk, the direction of which is the outline of a square pincushion having rounded corners, and gently pressed on the four sides. This walk is eight feet wide, and the arch eight feet high. American arbor-vitæ is planted on each side of it, and now completely envelopes the walk, excluding the sun's rays, and rendering it a delightful retreat in hot sunny weather. Its exterior effect is striking, more especially when viewed from an elevated position, in conjunction with the other garden embellishments. At a little distance it presents the appearance of an even light green velvety nap, having various openings and loopholes, which are formed and arranged with architectural exactness. To persons on the walk, these loopholes, or representations of windows, present occasional opportunities of viewing the garden, which has a rich and singular appearance, from the extraordinary character and colouring of the subjects employed in its embellishment. The covered way only constitutes an outline to the centre, having other arrangements within it, the whole being surrounded at right angles with a raised terrace thirty feet wide. On the terrace next the castle there stands in the centre a sun-dial of singular workmanship, and on each side of this two Irish yews, in the form of half-circles, eight feet high. The back of these is towards the garden. In the concavities facing the castle are pedestals in gold, supporting richly carved figures in gold also. These contrast advantageously with the dark green of the yews. Eight covered seats, placed in regular positions, here represent the form of an old hall chair. The bases of these, as well as the covered walk, have variegated box, out of which spring the American arbor-vitæs, which are dressed in like manner. The raised terraces right and left are thus arranged—Irish yews and gold yews alternating. In front are gold yews and Irish junipers, similarly planted; they are all as nearly as possible ten feet high. The gold yews are trimmed into columns bearing crowns of the same. A second terrace rises above this on the north side, on the centre of which stands an enormous columnar yew, with a gigantic crown across. The gold yew has been grafted in various parts of the crown, and with good effect. This yew has a trimmed square base of thirty feet on the side, and three feet high; and again out of this rises a second circular base, eighteen inches above the former, out of which springs the column. Right and left of this noble plant are two pillar yews upwards of forty feet high, and then twelve similar yews of large dimensions; all these have been brought from a distance of upwards of thirty miles. Right and left, again, are Araucaria imbricata, at regular distances; on this raised terrace there are thirty specimens. The terraces are approached at right angles by stone steps facing the entrances, with covered walks, which lead to the interior parterre, and which may be said to be formed of a combination of angular beds. In the centre stands a remarkable plant of Araucaria imbricata. Its manner of growth has the appearance of the Norfolk Island pine, the branches to the ground assuming the pendant frond-like habit of that plant, and it is no doubt a very distinct variety, for amongst the multitude of specimens of this Araucaria at Elvaston no other plant exhibits this peculiarity of growth. It has been planted fifteen years, during which period it has grown twenty inches and a half, on an average, annually, since it was planted. The Araucaria is often set down as a tree of extremely slow growth, but we have here a striking example to the contrary; and not only in this particular specimen, but in hundreds of others which are making equally rapid progress. In the divisions of this central department are other fine specimens of Araucaria and Cryptomeria japonica, the character of the whole being fully maintained by an arrangement of gold yews, Irish yews, and Irish junipers, planted so as to produce that same peculiarly striking effect which the exterior arrangement so amply discloses. In every part of these beautifully arranged grounds there are thousands of plants of great value, and the embellishments are of the most costly kind. Gigantic yews, low-cut yews, cedars of Lebanon, ambrosial bowers, statuary, beds of variegated flowering plants, forming when in bloom richly embroidered carpets, are tastefully arranged, and must be seen to be appreciated. Passing from the south-front entrance to the east, the visitor obtains a magnificent view down the great avenue, in the centre of which is a finely-kept lawn, each side of which is tastefully planted. From this point he traces his steps by the North-terrace Garden (which is suitably adorned), through labyrinths of yew hedges, Portugal laurel hedges, &c.; thence by the Magnolia Garden, with its sweetbriar hedges, and through a grove of cedars, when the lake and its wonderful auxiliaries suddenly burst on the view of the beholder—

> "So wondrous rare, the whole might seem
> The scenery of a fairy dream."

The lake, which is of considerable dimensions, abounds with large rocky decorations, clothed occasionally with lofty pines, and amongst the rugged decorations of the water are islands covered with rocks and planted with weeping hollies, junipers, &c. A high irregular mass stands out boldly in the foreground, covered with Araucaria imbricata to the summit, intermixed here and there with occasional groups of broom and other plants. From this point the view is very extensive, and the eye might well be content to rest upon it; but time presses, and turning a little to the left you enter the Fountain Garden, where various jets emit their playful streams of crystal, and a massive rockery in the back ground protects, as it were, a curiously executed shell grotto. Pursuing the course pointed out, through masses of rock and under covered yew hedges, you arrive at an arch, on looking through which the lake presents an extensive range, and new forms arise in the distance. At length you arrive at the narrow part of the lake, which is crossed by a bridge, the vista from which is extensive and varied, with no appearance of a close. In traversing the north side of the rock, bold promontories of various forms jet forward, and the whole is backed by an extensive plantation.

> "Nor shall thy reverend yews, the sires who hold
> Their sceptres verdant through the changeful year,
> Unnoticed stand,"

For it is stated that in this plantation there are some yews six hundred years old. This lake, with its towering rocky projections and Alpine decorations, is entirely a work of art, and was, we believe, commenced in the year 1839. Many thousands of tons have been employed in the formation of the rock-work; and many of the large yews and cedars of Lebanon were transplanted and removed distances varying from four to forty miles. Instead of a few choice trees and plants scattered here and there, Elvaston Gardens are literally ornamented with acres of them. Since the death of the late earl, comparatively few labourers have been retained to keep the gardens in order; but, with here and there an exception, they still look very beautiful, and there is nothing of a similar kind in this country which at all approaches them.

THE GARDENERS' BENEVOLENT INSTITUTION.—The ninth anniversary of this valuable institution was held at the London Tavern on June 14th, Charles Dickens, Esq., chairman. In proposing the toast which expresses the assembled interest in the institution in whose behalf they were met together, he observed,—"I feel, in reference to this institution, something in the position of counsel for the plaintiff, with nobody on the other side. Although it had existed, instead of three times three, nine times nine years, I should still feel it my duty to trouble you with a few facts from the very short brief which has been entrusted to me; for that desperate gardener, Old Time, does so transplant and remove, as to warrant the supposition that there are always some to whom it may be desirable to state the merits of the case. The institution was founded in the year 1838, and for the first few years of its existence it seems not to have been particularly robust, and to have received rather more than its needful allowance of cold water; but in 1843 it was removed into a more genial situation, and grafted into a better *managerial* stock, and began to blossom and bear fruit; and now, under the shade of its friendly branches, thirty-five old people daily sit. It is to be observed of this institution, unlike some older and more renowned, that what it is in name it is in effect. The class for whose benefit it purports to be devised have its full and entire advantage. All the pensioners have been veritable gardeners or their widows; and, besides having upon its books this excellent rule, 'That gardeners who have contributed to the funds of the charity for fifteen years, and from old age or misfortune became destitute, have claims upon the institution in preference to those who have never subscribed to it,' I observe that every subscriber is placed on the pension list by his own independent right. I lay great stress upon this, because I hold that the main principle of every society such as this should be is, in the first place, to help those who have helped themselves and helped others; and, secondly, to merge all considerations of its own importance in the sacred duty of relieving such persons, when they fall into affliction, with the utmost possible delicacy, and without the least chance of carrying a pang to their hearts, or bringing a blush to their honest cheeks (loud applause). That the society's pensioners do not become such so long as they are reasonably able to toil is proved by the fact that the average age of the present pensioners is seventy-seven. That they are not wastefully relieved is shown by the fact that the whole sum expended for their relief does not exceed five hundred pounds per year. That no narrow confines of locality are favoured in the selection will be clear when I assure you that the pensioners are found in every part of the country, east, west, north, and south. That the expenses of management are not disproportionate to the society's income is proved by their being all defrayed out of the annual subscriptions. The sum at present in hand is two thousand seven hundred pounds, and we mean to make it up to three thousand at least (applause). Such is the institution we now appeal to you to support; first to the employers and employed, and secondly to the members of the public of all degrees. That it has not addressed itself in vain to the employers is evident from its having for its president his Grace the Duke of Devonshire, whose whole possessions were remarkable for taste and beauty. And I notice with great pleasure on the list of its patrons the names of noblemen and gentlemen of great influence and station. I am particularly struck, in looking through the pages of this little book, with the number of nurserymen and seedsmen who have contributed, and the handsome sums written against their names. It is a very worthy example. The gardeners also muster very strong; and I do hope the day will come when not one will be left out, but every decent gardener in England will feel this society is a part of his calling, and though he may never want its aid, it is his duty to belong to it for the sake of others who may. The gardener particularly needs such a provision as this institution affords; his gains, if any, are not great, and I believe he often knows gold and silver better as colours of flowers than as coins; and it is easy to see how his exposure to the changes of the weather may render him particularly liable to sickness and infirmity. A gardener, of all men, should particularly appreciate the worth of such a society as this, for his continual observance of the changing seasons and the declining days may well suggest to him the decline of life, and that it is a dictate both of worldly prudence and Christian kindness thus to provide for it. Finally, to all here who are gardeners, and to all here who are not gardeners, except as we all trace our descent in a direct line from the first gardener Adam, this institution forcibly appeals. The universality of the results of the gardener's calling is one of its greatest characteristics. If any improvement be made in Her Majesty's garden, or in that of his Grace or my Lord, it is very soon transferred even to the costermonger. In the culture of flowers there can be no room for anything very selfish or very exclusive. The wind that blew over the cottager's porch swept also over the grounds of the nobleman; and as the rain descended so universally, so it communicated to all gardeners, both rich and poor, an interchange of pleasure and enjoyment; and the gardener of the rich man, in developing and enhancing a fruitful flavour or a delighful scent, was in some sort the gardener of everybody else. It seems to me that a gentleman who spends large sums of money in developing a new flower or improving an old one is a public benefactor, and his gardener is in some sense *my* gardener, and everybody else's. Flowers are the best picture-books I know; and whenever I see them lying open at the labourer's door, I can always read in them that he is a better and happier man. It is not too much to say, the gardener is essential to all of us; he is associated with all countries and with all periods of time. Men who have agreed in nothing else have agreed to delight in gardening. The ancient people of the earth had gardens where now there are only ruins. The younger ancients had crowns of flowers. In China hundreds of acres are employed in gardens. When we travel by our railways we see the weaver striving for a scrap of garden, the poor man wrestling with smoke for a little bower of scarlet-runners, and they who have no spot of ground of their own will carry on their gardening in jugs and basins (cheers). We know how we find flowers in the factory and workshop, and even the prisoner in his lonely cell was found gardening after years and years of solitary confinement. Surely, then, the gardener, who produced shapes and objects so lovely and so comforting, should have some hold upon *the world's remembrance* when he himself became in need of comfort. Of the exponents of a language so universal as this, it is not too much to say that such men have a strong claim upon us when they need comfort; and, therefore, coming at last to three times three cheers for the three times three years, I give you 'Prosperity and Perpetuity to the Gardeners' Benevolent Institution.'"

HORTICULTURAL SOCIETY'S EXHIBITION, HELD IN THE GARDENS AT CHISWICK, JUNE 12.—The quantity of the specimens shown was enormous, and their quality of very first-rate excellence. The display was brilliant in the extreme, and would have amply repaid for even a *walking journey*, from the most remote part of this kingdom, any lover of superb flowering plants, as well as fruits. We cannot enumerate all that was exhibited and obtained prizes, and therefore can only give particulars of one or two of the best collections or specimens in each *class*, by which our readers may judge of the merits of the plants mentioned.

In collections of 20 *Stove and Greenhouse Plants*, the 1st prize was awarded to Mr. May, gardener to Mrs. Lawrence, of Ealing Park, for as good a group of plants, perhaps, as ever was staged. At the back stood a Polygala acuminata, upwards of seven feet in diameter, and profusely covered with flowers; the graceful Coleonema rubrum, equally fine; Azaleas coronata, magniflora, and lateritia, still "mountains of flower;" the blue Leschenaultia, more than three feet through, and a mass of blossoms; Stephanotis floribunda, fresh, sweet, and beautiful; a very fine specimen of the red variety of Erica tricolor, and the Cavendish and other Heaths, together with the handsome pink-blossomed Adenandra fragrans, one of the better kinds of Everlasting, the ever-flowering red Leschenaultia, Ixora crocata, the clear yellow Gompholobium splendens, in the shape of a little bush, which looks much better than when it is trained stiffly on a trellis; Boronia serrulata, the Showy Rondeletia, the brilliant Epacris miniata, Pimelea mirabilis, in the way of, but rather handsomer than, decussata; and a noble Clerodendron Kæmpferi. The 2nd prize was awarded to Mr. Cole, gardener to H. Colyer, Esq., of Dartford, for a fine exhibition, which comprised a huge Allamanda Schottii; Dipladenia splendens, unusually well flowered; the charming D. crassinoda; the pale yellow-blossomed Allamanda grandiflora; Clerodendron paniculatum, bearing enormous panicles of gaudy flowers; the White Ixora, hardly sufficiently advanced in bloom; the Gledstane Azalea, a well-flowered Phænocoma proliferum; Leschenaultia formosa, a depressed pyramid of red blossoms; the sweet Stephanotis floribunda; an Everlasting; Pimelea Hendersoni, richly ornamented with rosy blossoms; Erica Cavendishii, and two varieties of E. tricolor; the Hoya-like Cyrtoceras reflexum; Polygala acuminata and cordifolia; the rosy-eyed white-flowered Vinca; Pimelea mirabilis; an immense Pimelea decussata; and an example of Azalea lateritia, Gledstanesii, and variegata, all "worked" together on one stock. A third group was contributed by Mr. Taylor, gardener to J. Coster, Esq., of Streatham. It consisted of a good Stephanotis floribunda; the favourite white-flowered Gardenia florida; a finely-blossomed Chironia glutinosa; Erica Cavendishii, a complete mass of yellow blossoms; the ever-flowering E. mutabilis; the red Leschenault; Boronia serrulata and pinnata; the scarlet Ixora; the bright yellow Allamanda cathartica; Polygala cordifolia; and one or two other plants. In Messrs. Fraser's collection, which was fourth, we remarked Epacris miniata and grandiflora; a fine Pimelea Hendersoni; Clerodendron Kæmpferi, with two spikes of scarlet flowers; the much-esteemed Stephanotis floribunda; a neat bush of Chorozema varium nanum; Erica Wilsoni, the best of all the varieties of tricolor; the Diosma-leaved Pimelea; Polygala acuminata; one of the best of the Everlastings; the red Leschenaultia; the white-blossomed sweet-scented Sphenotoma gracilis; Ixora coccinea; Allamanda cathartica; the Azaleas Gledstanesii and lateritia, united in one plant; Pimelea mirabilis; Aphelexis humilis; and the Cavendish Heath.

In collections of 15 *Stove and Greenhouse Plants* the 1st prize was awarded to Mr. Green, gardener to Sir E. Antrobus, Bart., of Cheam, whose group consisted of the Azalea variegata, almost as gay as in the month of May; a nice Polygala acuminata; Stephanotis floribunda, loaded with snowy blossoms; an excellent specimen of Rondeletia speciosa; a luxuriant Allamanda cathartica, scarcely at its best as regards bloom; Azalea vivicans and præstantissima, both pyramids of brilliant flowers; Leschenaultia formosa and Baxteri; the Wilson variety of Erica tricolor; the scarlet and saffron Ixoras, both insufficiently advanced in bloom; Polygala Dalmaisiana; an Everlasting; and Erica depressa. Mr. Carson, gardener to W. F. G. Farmer, Esq., of Cheam, sent the next best group, the crown-head of which was decidedly Gardenia Fortuni, a fine plant covered with large double white sweet-scented flowers; then came Allamanda grandiflora and cathartica, both handsomely furnished with yellow blossoms; a large Epacris miniata; the charming rosy-flowered Dipladenia crassinoda; the red Leschenault; Azalea Gledstanesii and variegata; the scarlet Ixora; Polygala oppositifolia; the purple variety of Aphelexis macrantha; Crowea saligna; and small plants of Polygala Dalmaisiana, Leschenaultia Baxteri, and Coleonema rubrum. Mr. Dods, gardener to Sir J. Cathcart, Bart., sent a huge Epacris miniata; Allamanda cathartica; Azalea Danielsiana, a perfect mass of brilliant flowers; the small yellow-blossomed Dillwynia floribunda; Pimelea hispida (a neat kind), and P. Hendersoni: Tetratheca verticillata; an Everlasting; the scarlet Ixora; a pale variety of Erica tricolor; Clerodendron fallax; and a neat Leschenaultia formosa.

Helichrysums.—Collections were shown by Messrs. Veitch (1), Green (2), Stuart (3), and Taylor (4). In these we remarked Aphelexis macrantha purpurea and macrantha rosea, speciosissima, purpurea grandiflora, humilis and humilis rubra, spectabilis grandiflora, sesamoides and its large variety, and rupestris.

Orchids.—These were plentiful and exceedingly fine, though perhaps they scarcely had the freshness and delicate beauty about them which they possessed in May. In the group of 20 plants from Mr. Blake, gardener to J. H. Schröder, Esq., to which the 1st prize was awarded, we remarked Galeandra Baueri; a large plant of Aerides odoratum, hardly sufficiently advanced in bloom; the pretty A. Larpentæ, and other species of that lovely genus; the white Dendrobium Heyneanum; Lælia cinnabarina; Saccolabium præmorsum and guttatum; the Bearded Lady's Slipper (Cypripedium barbatum); a very fine white Butterfly Plant (Phalænopsis grandiflora); one of the many varieties of Cattleya Mossiæ; a fine plant of Vanda tricolor; the slender-leaved Maxillaria; Lacæna bicolor, well flowered; Calanthe veratrifolia, in admirable condition; the Wray Brassia, Lycaste aromatica, and Vanda teres. Mr. Franklin, gardener to Mrs. Lawrence, sent the next best collection, in which were Sobralia macrantha, bearing some fifteen or sixteen glorious purple blossoms; Aerides purpurascens and odoratum; the broad-leaved Epidendrum; Oncidium flexuosum; Lacæna bicolor, with six flower-spikes; Vanda tricolor, insignis, and Batemanni, the latter with a strong spike of beautiful blossoms; Saccolabium Blumei and S. guttatum; Trichopilia tortilis; the brown-spotted, green-flowered Brassia Wrayæ; Oncidium Papilio, bearing five glorious flowers; the Dalhousie Dendrobe; a good Cattleya Mossiæ; Epidendrum alatum, with two fine flower-spikes; the useful Oncidium pulvinatum, and Odontoglossum hastilabium. Mr. Williams, gardener to C. B. Warner, Esq., had a large Aerides odoratum, in good condition; A. crispum, with four fine flower-spikes; A. purpurascens, insufficiently in bloom; the charming A. maculosum; the large Butterfly

Plant; Oncidium flexuosum; a small Dendrobium Wallichii; a beautiful Saccolabium guttatum, bearing ten flower-spikes, some of which were nearly eighteen inches in length; Cattleya Loddigesii, fresh and fine; a nice plant of C. Mossiæ; Calanthe veratrifolia; the favourite Epidendrum cinnabarinum; Oncidium ampliatum major, rather past its best; the Bearded Lady's Slipper; Vanda tricolor and V. suavis; the large white-lipped Zygopetalum rostratum, and the as yet somewhat scarce Trichopilia coccinea.

Azaleas were again produced by Mr. Green and Mrs. Lawrence, but this time their brilliancy was much impaired. The sorts consisted of magniflora, decora, lateritia, Gledstanesii, variegata, Rawsoni, optima, rosea punctata, and exquisita alba. Mr. Fleming, gardener to the Duke of Sutherland, at Trentham, sent small plants of some of the newer kinds, among which were Amaranthina, a good sort, with large rosy blossoms; Comosa, Grandis, Iveryana, Decora, and Beauty of Reigate. Messrs. Lane had a collection of small plants, in which two and three sorts were "worked" together on one stock.

Messrs. Veitch received a Silver Banksian Medal for Rhododendron album grandiflorum, a hardy-looking kind, the produce of a cross between R. catawbiense and maximum album. The flowers are of good shape, and white, marked in the upper petal with a straw-coloured stain.

Tall *Cacti* in flower were furnished in good condition by Mr. Green, who produced the large-flowered variety of the white Epiphyllum crenatum; E. Ackermanni; E. speciosum, and its much handsomer variety elegans; E. grandiflorum, and Cereus speciosissimus.

Roses in pots were, as usual, much admired, and fine for June. The gems of Messrs. Lane's group, which was first, were Paul Ricant, certainly one of the very finest Roses we possess, being both excellent in shape and brilliant in colour; Great Western, Magna rosea, a large blush, but rather loose; Paul Perras, Emperor Probus, Duchess of Sutherland, and Queen. Messrs. Paul produced Barbot, buff, with a salmon centre; Goubalt, the favourite Souvenir de la Malmaison, Mrs. Bosanquet, Paul Perras, and Madame Plantier, the latter hardly sufficiently in bloom. Mr. Francis had a fine plant of Brennus, a tall Coupe d'Hébé, Pauline Plantier, with small pale yellow flowers, and Warricus. In the Amateurs' Class, the 1st prize was awarded to Mr. Terry, gardener to Lady Puller, of Youngsbury, for admirably-managed plants, among which were Sophie de Marcilly, blush, with a pink centre, neat and beautiful; Elise Sauvage, Las Casas, a very fine example of Souvenir de la Malmaison, which is deservedly the most esteemed of Roses; Duchess of Sutherland, Paul Perras, fresh and fine, La Ville de Bruxelles, Armosa, and Lamarque. Among Mr. Rowland's plants that which elicited most attention was Paul Ricant, which is a grand acquisition to the class of Hybrid Bourbons. The same gentleman had also good examples of Coupe d'Hébé, Emperor Probus, Queen, Paul Perras, Ne plus ultra, Chénedolé, and Louis Bonaparte. From Mr. Roser, garderer to J. Bradbury, Esq., came our old friends Baronne Prevost and La Reine.

Cape Heaths were plentiful, well cultivated, and beautifully flowered. Among Nurserymen, Mr. Epps, of Maidstone, had the best plants; but they were disqualified on account of two of the sorts being so much alike as to be hardly distinguishable one from the other, the schedule requiring *entirely distinct* varieties. The plants in question consisted of tricolor Wilsoni and a seedling from it. The 1st prize was therefore given to Messrs. Rollisson, the 2nd to Messrs. Fairbairn, the 3rd to Messrs. Frazer, and the 4th to Mr. Pawley. In the Amateurs' Class, Mr. Smith, gardener to W. Quilter, Esq., was 1st; Mr. May, gardener to Mrs. Lawrence, 2nd; Mr. Cole, 3rd; and Mr. Laybank, 4th. For plants in 11-inch pots, Mr. Epps was 1st, Mr. Clarke 2nd, and Mr. Pamplin 3rd; and among Amateurs, Mr. Roser was 1st, Mr. Watson 2nd, Mr. Jarvis 3rd. and Mr. Stanly 4th. Three groups in 8-inch pots were furnished by Messrs. Taylor, Speed, and Hamp. In the different collections we remarked the following varieties:—Ventricosa grandiflora (a very fine sort), V. breviflora, V. tumida, V. superba, V. prægnans, Inflata, I. rubra, Vestita coccinea, Cavendishii, Bergiana, Depressa, Tricolor, T. Leeana, T. elegans, T. Wilsoni, T. rubra, Halicacaba, Massoni, Vernoni, Mutabilis, Gemmifera, Elegans, Perspicua, Beaumontia, Metulæflora, Eximea, Alberti (buff), Batemanni, Jasminoides, Thunbergia, Jubata, Florida, Dilecta, Obbata, Tortiliflora, Westphalingia, Maidstonensis, Savilleana, and Odora rosæ.

Single Specimens.—The best of these were Erica Massoni, from Mr. Bruce, gardener to B. Miller, Esq., of Merton; a good example of the charming Hoya bella, from Mr. Over; Erica Cavendishii, from Mr. May, gardener to Mrs. Lawrence; a large E. Bergiana, from Mr. Smith, gardener to W. Quilter, Esq., of Norwood; Leschenaultia formosa, from Mr. Cole; and Mitraria coccinea, from Messrs. Veitch.

New Plants.—Messrs. Backhouse, of York, sent the beautiful Lælia purpurata, Cleisostoma (?) crassifolium, and the Californian Diplacus; Messrs. Veitch had Streptocarpus biflorus; Messrs. Standish and Noble the orange-scarlet Chinese Lilium sinicum; and Mr. Over the variety of Hoya bella called Paxtoni; Mr. Woolley had Dendrobium clavatum; and Messrs. Rollisson a variety of Oncidium Papilo called pulchellum.

Foremost among *New or Rare Plants* not in flower were the evergreen pinnated Chinese Berberries (trifurca and Bealii), furnished by Messrs. Standish and Noble; these were the admiration of everybody. Then came the beautiful variegated-leaved Cissus discolor, from Messrs. Rollisson; two magnificent leaves of the Royal Water Lily, from Mr. Ivison, gardener to the Duke of Northumberland at Sion; and Fitz-Roya patagonica and Saxe-Gothæa conspicua, from Messrs. Veitch, of Exeter.

Lycopods were contributed by Messrs. Woolley and Stuart. Among these were L. stoloniferum, cæsium arboreum, apodum, Louisianum, cordatum, cuspidatum, and denticulatum.

Hothouse Ferns.—Of this most interesting tribe the following were shown, intermixed with Orchids, by Messrs. Woolley and Williams; viz., Adiantum forianum, formosum, cuneatum, concinnum (fine), trapeziforme, and macrophyllum; Gymnogramma sulphurea (fine), Goniopteris vivipara, Darea cicutaria (fine), and Blechnum brasiliense.

In *Pelargoniums*, 12 varieties, the 1st prize was withheld. The 2nd prize was awarded to Mr. E. Lawrence, for Gulielma, Alonzo, Constance, Ajax, Marianne, Conspicuum, Governor, Ocellatum, Star, Prince of Orange, and Rosamond. Dealers: 1, Mr. J. Dobson, of Woodlands Nursery, Isleworth, whose plants were finely flowered, and "to the day." They consisted of Gertrude, Magnificent, Painter improved, Mont Blanc, Jupiter, Ambassador, Purpureum, Silk-mercer, Diadem, Delicatissimum, Vanguard, and Star; 2, Mr. Turner, of the Royal Nursery, Slough, with plants, scarcely at their best, of Constance, Rubens, Rowena, Alonzo, Ganymede, Magnificent, Rosamond, Gulielma, Ajax, Narcissus, Beatrice, Enchantress; 3, Mr. Westwood, of Acton-lane; 4, Mr. Bragg, of Slough. Six Pelargoniums, in 11-inch pots: 1, Mr. Parker, of Teddington, four of whose plants were marvels of good cultivation. The sorts were—Thisbe, Bertha, Rosamond, Gulielma, Centurion, and Star. Dealers: 1, Mr. Westwood, with Bianca, Star, Cuyp, Sarah, Rosamond, and Painter; 2, Mr. Turner, with Constance, Pride of the Isles, Narcissus, Rowena, Alonzo, and Norah. Six Fancies: 1, Mr. Robinson, of Thames Bank, with Queen Superb, Madame Miellez, Fairy Queen, Princess Maria Galitzin, Perfection, and Richard Cobden; 2, Mr. Roser, with Statiaski, Hero of Surrey, Picturatum, Prospero, Magnificum, Jenny Lind. Dealers: 1, Mr. Turner, with Princess Maria Galitzin, Defiance, Miss Sheppard, Anais, Exquisite, and Triumphant; 2, Mr. Westwood, with Orlando, Mrs. S. Lefevre, Reine des Française, Nourmajed, Mrs. Bailey, Purity; 3, Mr. Ayres, of Blackheath, with Celestial, Queen Superb, Itolinski, Picturatum, Conspicuum, Alboni; 4, Mr. Gaines. The Five Guinea Cup for the new varieties of Fancy Pelargoniums sent out in autumn 1851, by Mr. W. P. Ayres, of Blackheath, was awarded to Mr. Robinson, and reflected credit both on the grower and the raiser; the sorts were Conspicuum, Caliban, Mirandum, Gipsy Queen, Advancer, and Formosissimum. Of Seedling Pelargoniums, we noticed Beck's Empress, and Turner's Queen of May, a conspicuous and striking variety; Pasha (Dobson) is distinct, and in many respects good; Optimum (Foster) was in capital condition, although the plant was by no means well grown. An interesting hybrid Pelargonium from Mr. E. G. Henderson received a Certificate; the tricolor-leaved sort from Mr. Kinghorn was, as it is named, "Attractive" for decorative purposes, but it could not be termed one of an *entirely new* cross. While on the subject of Seedlings, we may mention that Fuchsia Perfection (Banks) will be the best dark variety "out;" corolla deep purple, sepals and tube coral-red, smooth, the sepals reflexed sufficiently, and remarkable for their breadth.

Ranunculuses.—A collection of 50 superb varieties was furnished by Mr. Tyso, of Wallingford, among which were fine blooms of the following Seedlings of his own raising, viz., Flaminius, Minos, Exhibitor, Amasis, Dædalion, Cathcart, Dilectus, Dido, and a new yellow called California; also Lightbody's Herald, Thompson's Seedling, Giles' Eliza, Gomer, Lentulus, Costar's Apollo, and Charlotte.

Calceolarias were brought out better than hithertofore; but, to maintain their position, more, much more, must be accomplished. The 1st prize was awarded to Mr. Constantine; 2nd, to Mr. Franklin; and, 3rd, to Mr. Roser. Dealers: 1st, to Mr. Gaines, for Cruenta, Baron Eden, Endymion, Confidence, Christine, and Horatio.

EXHIBITION HELD IN THE ROYAL BOTANIC SOCIETY'S GARDEN ON JUNE 9.—The following new or rare plants were shown by Messrs. Henderson, of Pineapple-place:—Gompholobium Bidwillii, a species of good bushy habit, having large yellow pea-blossom flowers; and Gastrolobium calicynum, a desirable species, with brownish-yellow flowers, and of a robust habit; also Balsamia latifolia alba, a good stove species of neat habit, with pure white flowers; Stylidium mucronatum, an interesting species, with rosy-pink flowers; and Vriezia psittacina, a desirable species, with vermilion and yellow bracts. Messrs. Rollisson and Sons, of Tooting, had Panax excelsa, a handsome evergreen shrub, with large pinnate foliage, and flowers produced in dense racemes, but these are more beautiful in the bud than when fully expanded, being of a rich vermilion colour; also Munronia javanica, apparently suited for stove culture, and having pinnate leaves and white tubular flowers. A species of Linaria, from Portugal, was sent by Mr. Stark, of Edinburgh; the flowers are of a dark purplish colour, and it is likely to prove a desirable species for the rock-work or border; also Barbarea vulgaris, fol. variegatis. Jonesia asoca, a stove shrub, with pinnate leaves and tubular orange and scarlet flowers, the filaments much exserted, apparently belonging to the order Sapindacæa, from Messrs. Henderson. Schizanthus retusus alba, from Mr. Cole. Messrs. Henderson, of the Wellington-road Nursery, sent a species of Piperomia, having broad fleshy leaves, and apparently of good habit; with this was Conradia verrucosa. Mr. Speed, of Edmonton, showed a good plant of Franciscea eximia, a fine free-growing stove species. Mr. Cole had a species of Ixora of good habit, having large leaves and compact heads of salmon-coloured flowers.

Single Specimens.—The best was HOYA BELLA, an admirably-grown plant, about three feet through; this was shown by Mr. Over, gardener to H. McMullen, Esq., Clapham.

Heaths.—No fewer than nine collections of 12 plants were contributed, four in the amateurs' class and five in the other. In the first were Mr. Smith, gardener to W. Quilter, Esq., Norwood, 1st; Mr. May, Ealing, 2nd; Mr. Cole, 3rd; and Mr. Roser, gardener to J. Bradbury, Esq., Streatham, 4th. Mr. Smith's plants were all large, and in fine flowering order; the best were Perspicua nana, ventricosa, retorta major, mutabilis, and Cavendishii. Mr. May had a beautifully grown Cavendishii, about four feet through, the curious Halicacaba, Tricolor Leeana, Vestita coccinea, and V. breviflora. The principal in Mr. Cole's group were Tricolor Wilsonii, three feet in diameter, Masonii, Elegans, Mutabilis, Depressa, and Cavendishii. In the open class, Mr. Smith's plants were in admirable condition, comprising Cavendishii, about four feet in diameter; Bergiana, equally large and handsome; Metulæflora, exquisitely grown; and Tricolor elegans. Messrs. Rollisson had a pretty Massonii major, also Tricolor Wilsonii florida, Prægnans superba, Jubata, and Ventricosa grandiflora, all superb examples of this tribe. Mr. Pawley had a beautiful Cavendishii, four feet through; a well-grown Massonii, two feet through; and Tricolor Wilsonii. Messrs. Fraser's Cavendishii was finely grown, being fully four feet through, and well flowered; with this may be mentioned Tricolor and Tricolor elegans as good plants.

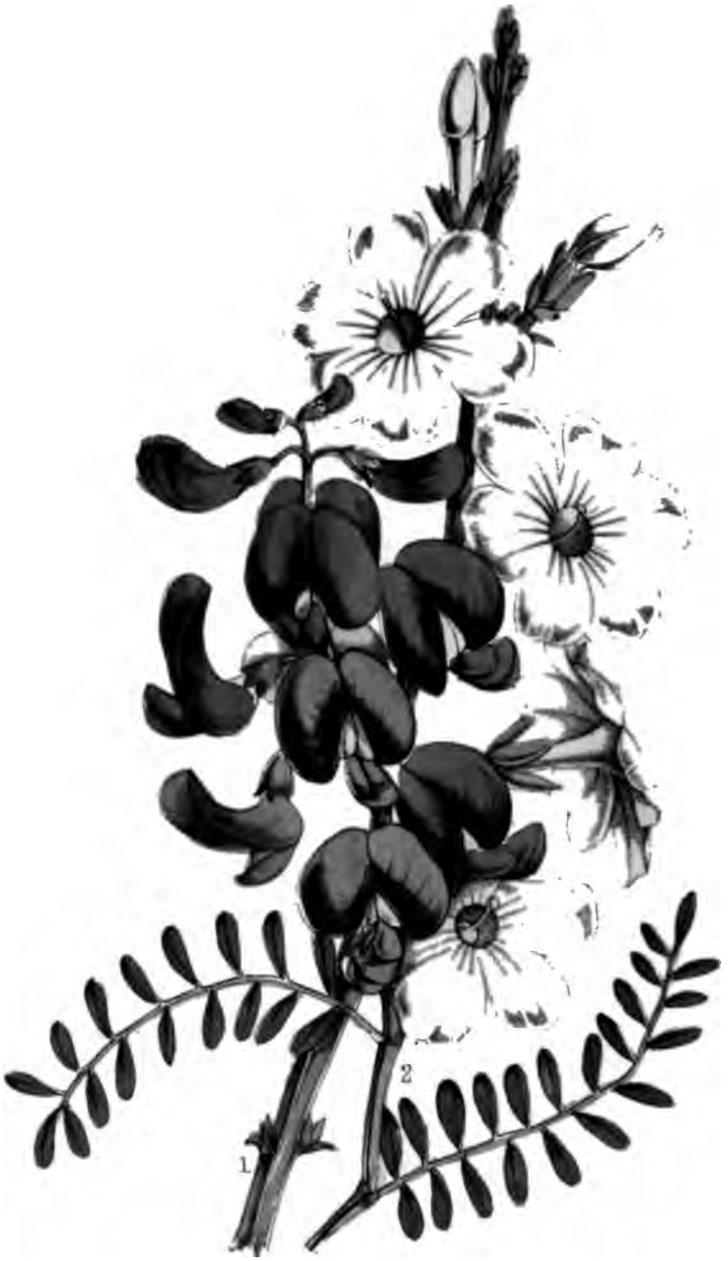
HOLLYHOCK.—Begin now, and take the suckers or young plants that have grown round the old one carefully away. Plant each in a small pot, using sandy-loam, mixed with some peat. Sprinkle them gently, and place them in a frame where they can get a genial bottom heat; and here they may remain till rooted. When roots are visible, give them a liberal shift, put them in a cold frame, give plenty of air, and in a short time afterwards plant them in the open ground. In this manner they may be continued as long as you can get cuttings.—*Senex.*

The Vegetation of Chagres River.—And here I must stop a moment to tell, as well as I can, of that most wonderful and surprising scenery. It was so gorgeous, so overloaded and smothered with beauty in a thousand different forms, that I feel confident that if Dr. Johnson had compiled and composed a dictionary of a hundred volumes, all filled with words meant to represent the sublime and the beautiful, he could never have supplied us with a sufficiency of words, or terms expressive enough, to describe such a bewildering magnificence. Each tree of that dense forest, besides the beauty and richness of its own colossal blossoms, was decked out, covered, and seemingly almost smothered with a wilderness of creepers, climbers, and parasites, each with a separate beauty of its own, and bearing a blossom more perfect than the most priceless hothouse exotic ever seen in England. Here before us is an example which I will take for a faint illustration. It is a gigantic zapoté-tree, nearly two hundred feet high; it is in full blossom. The flower is something like an enormous mass of floating scarlet satin, embroidered in gold and silver; from its gem-like centre floats a long streamer of feathery jewels (if one may use the expression), which, in the case of this flower close to us, drops partly into the transparent water, and is almost hidden, colossal as it is, by an equally colossal butterfly, of the deepest and most sky-like of all blues. We saw vast numbers of these lovely creatures on our journey. Close to the zapoté-tree is a majestic palm, growing together with a stately bamboo, rising in massive feathers to an immense height. Underneath luxuriate a hundred fan-palms, which much resemble their appropriately-given names. Over all this group of strange and lovely trees, a million of parasites twist and curl, joining one with the other, as with the careful skill and systematic arrangements of an embroiderer on gold. These festoonings and joinings together, and woven labyrinths of flowers, sometimes took the most enchanting and deceptive forms, resembling turreted castles, with oriel windows, crossed, and interlaced, and counterlaced in such thick clusters, that they looked in the distance like the richest stained glass. Remember, I have only taken an isolated case, a comparatively separate group, which I observed more particularly from its occurring in a clearing round an Indian hut, in a rank jungle, but at some distance from the real forest of high trees. Farther on, in this same clearing, was a formation of parasites which wonderfully resembled the ruins of an old castle or palace. The remnants of two little turrets, of exquisite architecture (as it seemed), might be observed over the half-fallen remains of an arch, so rounded, and peaked, and twisted, and wound with creepers, that it seemed as though the plants themselves, or the air, were their support; they had, no doubt, grown up round the decaying stump of a tree left standing when the other trees in the clearing were cut down. In some places, one group of trees would seem actually to be growing upon those below them: and above them, again, flourished and towered those same extraordinary plants I saw in Mexico (and of which I gave an illustration), only on a very magnified scale. Over some trees that we passed immense White Rose-trees (the Roses the size of Dahlias), climbing up to the very topmost bough and twig, poured down in a tangled torrent an enormous mantle of Roses and leaves, several feet thick, down into the swift river, hanging and floating on the water, which was scented and perfumed with the million of flowers thus borne on its surface. Through all this thick matting and leafy veil struggled the smothered blossoms of the half-murdered tree. Perfect clouds of brilliant birds and butterflies hovered over our heads, sometimes darting down to skim over the water, studding it as with a shower of mammoth gems, or alighting in flocks on the trees, to peck at the fruit with which hundreds of those marvellous trees were bent and laden. Several times they looked so tempting that we asked the boatmen to stop and let us get some; but they said we had much better not eat any fruit while the sun was so hot, in this unwholesome climate, and that they would get us as much as we chose at the next place we should stop at, for nothing. So we amused ourselves with doubly feasting our eyes on the incomparable beauties of that forest of fairy-land, instead of feasting our palates upon its delicious productions.—*A Young Traveller's Journal of a Tour in North and South America.*

Anagallis, Wintering, &c.—It is no uncommon thing to hear of some of our best flower-gardeners inquiring of their friends if they have any cuttings of the blue Anagallis to spare, saying that by some means or other they had not been successful in striking it the previous autumn. Such a complaint we have often heard at the usual spring season for propagating such things. Now, there is no plant which increases with more readiness in the spring than this Anagallis, provided there are any plants to propagate from; which, however, is very unlikely, if care has not been taken the previous summer to provide a supply early in the season. It is rare that this plant will strike root and live through the winter in the ordinary way. Other things strike and live, if cuttings of it be delayed later than July; but it is better to be earlier than that. In fact, I usually preserve a few of the spring plants left at turning-out time, which I allow to stand in a great measure pot-bound all summer; occasional stopping, and perhaps one shift, are all they get, and towards autumn a few short twiggy sticks are thrust into the pot, to act as a sort of protection to the long, crooked, unwieldly top it usually gets, and which any careless handling is sure to break off at the neck. It is true they are not ornamental by such treatment, but whoever did see Petunia or Anagallis in any other than an unsightly condition at that period? It is sufficient if by such means we are able to carry them through the winter; their progeny makes ample compensation for their untidy appearance. Now, in parterre gardening, a bed of blue Anagallis is generally deemed indispensable, there being nothing like it as regards colour, habit, and general adaptation to circumstances, and therefore cuttings of it in spring are really so invaluable that the possessor of such a stock is sure of the visits of some of his friends, who, with a pitiful tale, narrate their loss of this favourite. I would therefore impress on all such to save a plant or two at bedding-out time, and to take care during summer that they are not neglected; or, if their stock be exhausted, in filling up their beds. A few cuttings may be put in about June, which strike and grow pretty well at that time; but do not by any means delay the process later, unless you are better provided than usual with the means of striking and keeping this plant. I need hardly add that, when matured, it lives the winter quite as well as Verbenas, will endure more damp than Scarlet Geraniums, but not so much as Calceolarias, Penstemons, and Gaillardias.—*Florista.*

The Signs of Fair Weather.—When the sun is fair and bright at its rising in the morning, and is blushing without spots or black clouds near him when he sets at night, it is a sign of fair weather. When the moon is three or four days old, and has her horns sharp and pointed very bright, it is a sign of fair weather till she comes to the full, if not the whole month. If the moon has a bright shining circle about her when she is at the full, it promises fair weather for many days. When the stars shine clear and bright, and seem to dart out pointed rays, it is a sign of fair weather. Also, when clouds sink low, as into valleys at south-east or south-west, it is a sign of fair weather. If the tops of hills be clear, it is a sign of fair weather. If there are to the north-west white scattering clouds, like fleeces of wool, it is a sign of fair weather. When white clouds or mists hang just over rivers, and disperse no further, it is a sign of fair weather. When a rainbow appears after a shower, and the blue-yellow part of it be very bright, and the highest colours, they are tokens of fair weather. When bees fly far from their hives, and come home late, it is a sign of fair weather. When there are great swarms of gnats, it presages fair weather. Glow-worms shining by night is a sign of fair weather. When larks rise very high, and continue singing a long time, it is a sign of fair weather. When kites fly aloft, it bespeaks fair dry weather: Lord Bacon gives this reason for it, because the kite mounts most into the air of that temper wherein he delights; for this aspiring bird does not so much affect the grossness of the air as the cold and freshness of it, for being a bird of prey, and therefore hot, he delights in the fresh air. When lapwings or plovers fly high and then low, and make continual cries, it bespeaks warm weather. When swallows fly high, it is a sign of fair weather. When owls hoot much, it is a sign of fair weather; and though owls do always hoot much both in wet and dry weather, yet there is this difference, that their hooting is more clamorous in wet weather, but more easy and sedate in fair weather.

Ants.—Having been much troubled with ants in my plant-houses, I have tried nearly everything recommended in your pages, but without success. Spirits of juniper and turpentine only drive them away while the scent remains, but I find a mixture of levigated mercury and treacle will destroy them; I put the treacle on small plates, with a very small portion of the mercury, which soon attracts them. —*Gardeners' Chronicle.*



1 Jasminum nudiflorum. 2 Swainsona Osbornii.

AUGUST, 1852.

ILLUSTRATIONS.

“The tiny heath-flowers now begin to blow;
The russet moor assumes a richer glow;
The powdery bells, that glance in purple bloom,
Fling from their scented cups a sweet perfume;
While from their cells, still moist with morning dew,
The wandering wild bee sips the honied glue:
In wider circle wakes the liquid hum,
And far remote the mingled murmurs come.”

“In this delightful garden,
This paradise of flowers,
The gay delight of man,
The treasure of the earth,
The wonder of the world, the work of God,
By the soft music of the rills and birds
Let us sit down in joy.”

“Observe the rising Lily’s snowy grace,
Observe the various vegetable race;
They neither toil nor spin, but ceaseless grow,
Yet see how warm they blush! how bright they glow!
What regal vestments can with them compare!
What king so shining, or what queen so fair!”

1. JASMINUM NUDIFLORUM.

The elegant *Jessamine* is an universal favourite. The name is derived from the Greek, and signifies “an agreeable odour.”

Jessamine is one of the shrubs of which Milton forms the bower of Adam and Eve in Paradise:

“Thus talking hand in hand alone they pass’d
On to their blissful bower: it was a place

Chosen by the sov'reign Planter, when he framed
All things to man's delightful use; the roof
Of thickest covert was interwoven shade,
Laurel and Myrtle, and what higher grew
Of firm and fragrant leaf: on either side
Acanthus, and each odorous bushy shrub,
Fenced up the verdant wall, each beauteous flower,
Iris all hues, Roses and Jessamine,
Rear'd high their flourish'd heads between, and wrought
Mosaic; underfoot the Violet,
Crocus and Hyacinth, with rich inlay
Broider'd the ground, more coloured than with stone
Of costliest emblem."

The poet Cowper speaks of the common white in the following passage:—

"The *Jasmine* throwing wide her elegant sweets,
The deep dark green of whose unrivall'd leaf
Makes more conspicuous, and illumines more,
The bright profusion of her scatter'd stars."

"Who that hath reason and his smell,
Would not 'mong Roses and Jasmine dwell!"

"Come gentle air! and while the thickets bloom,
Convey the *Jasmin's* breath divine,
Convey the woodbine's rich perfume,
Nor spare the sweet-leaved eglantine."

"The Jessamine, with which the queen of flowers,
To charm her lord, adorns his favourite bowers;
Which brides by the plain hand of Neatness drest,
Unenvied rival! wear upon their breast;
Sweet as the incense of the morn."

The Jessamine is more fragrant by night than by day:

"'Twas midnight—through the lattice, wreathed
With woodbine, many a perfume breathed
From plants that wake when others sleep;
From timid *Jasmine* buds—that keep
Their odour to themselves all day,
But, when the sun-light dies away,
Let the delicious secret out
To every breeze that roams about."

There is an elegant gallantry in the following lines, from the Spanish of Don Luis de Gongora:—

"From my summer alcove, which the stars this morn
With lucid pearls o'erspread,
I have gathered these *Jessamines* thus to adorn
With a wreath thy graceful head.
From thy bosom and mouth they, as flowers, ere death,
Ask a purer white, and a sweeter breath.

Their blossoms, a host of bees, alarmed,
Watch'd o'er on jealous wing;
Hoarse trumpeters seemed they all, and armed,
Each bee with a diamond sting:
I tore them away, but each flower I tore
Has cost me a wound which smarteth sore.

Now, as I these *Jessamine* flowers entwine,
A gift for thy fragrant hair,
I must have from those honey-sweet lips of thine
A kiss for each sting I bear:
It is just that the blooms I bring thee home
Be repaid by sweets from the most lovely one."

The Hindoos, who use fragrant flowers in their sacrifices, particularly value the Jessamine for this purpose.

Jessamine abounds in the gardens of the Italians. In the East it is cultivated for the stems too, of which *pipes* are made. Dallaway says, speaking of the Turks:—"In his pipe an opulent man is extremely sumptuous; the head must be of pale amber, the stick of jasmine-wood with the bark preserved, and the bowl of a delicate red clay, highly ornamented. According to the dignity of the smoker is the length of his pipe, often six or seven feet, and it is carried by two of his servants from place to place, with much ceremony; also the bowl is supported by wheels as an aid to supreme indolence. In the summer, for greater coolness, the stem of the pipe is covered with cotton or muslin, and moistened with water. This sovreign recreation is not confined to the men; the ladies, especially those advanced in life, partake of it largely; and, as a delicacy, they mix the tobacco with frankincense, musk, or aloes-wood."

The Jasmine we now figure is one of the many valuable and interesting discoveries of Mr. Fortune on his first visit to China, where he found it growing in many of the gardens and nurseries, particularly about Shanghae, Loo-chou, and Nanking. Plants were sent to the Horticultural Society's garden at Chiswick, where it was treated as a greenhouse plant. Mr. Fortune wrote as follows:—"It appears to be a greenhouse plant, and grows very freely in rough sandy peat. During summer an ample supply of water should be given to its roots, and it must be syringed overhead once or twice a-day. It is a profuse winter blooming plant, continuing for a long time. It is a very ornamental dwarf shrub, and I have no doubt of its being perfectly hardy in England. It is deciduous; the leaves falling off in its native country early in autumn, and leaving a number of large prominent flower buds, which expand early in spring, often when the snow is upon the ground, and appear like primroses."

It proves quite hardy in England, and blooms from towards the end of November up to March, or later, according to the aspect, or other circumstances, in which it is grown. It blooms the earliest when trained against a wall, or trellis. It forms a nice shrub too in the open ground, and by cutting in the shoots it becomes quite bushy, and when in profuse bloom is very ornamental. It is a cheerful companion when seen from the dwelling-house, at that period of the year. being a pretty contrast later on for the Mezereum, &c. It grows and blooms very freely in pots, and is highly ornamental during the entire of winter and spring for the greenhouse, sitting-room, entrance-hall, &c. A prolonged period of blooming is easily provided for by having plants kept on the north side of a wall, &c., and from thence successively taken in-doors.

The plant merits a place in every greenhouse, sitting-room, garden or shrubbery, from the palace to the humblest cottage.

2. SWAINSONA OSBORNII.

It is a half-shrubby, hardy herbaceous plant, a native of the Darling Downs in Australia, where it was discovered growing by the side of water. We saw it in beautiful bloom in the nursery of Messrs. Osborne and Sons, of Fulham. The plant is very neat, dwarfish, and blooms in profusion. Its pretty pea-shaped flowers are very handsome, and render it deserving a place in every flower-garden. It is a valuable acquisition to the charming tribe of hardy herbaceous border plants. We are glad to be enabled to state, that *hardy herbaceous plants* for the flower-garden are now much sought after, more especially the *showy* bloomers. Their cultivation stands recommended to all lovers of flowers, by a vast variety of form, colours, &c., the ease with which they are cultivated and a collection kept up; also they may be procured at a very cheap rate. As quantities of them are usually kept in pots by the general nurserymen and florists, a garden may be fitted up at any season of the year, and a very trifling cost is only required in their subsequent management.

NOTES ON NEW OR RARE PLANTS.

ACHILLEA COMPACTA.—A hardy herbaceous perennial, two to three feet high. The flowers are produced in large compact heads, in profusion, of a bright golden yellow. Very pretty. When grown in contrast with the Achillea rosea, it has a pretty effect. They bloom throughout summer.

AOTUS DRUMMONDII.—A very neat greenhouse-shrub from the Swan River, seeds of which have been obtained by Messrs. Henderson's, of the Pine Apple Nursery. All the Aotuses are pretty pea-like flowering plants, the blossoms borne in profusion, but of very small size. The present species forms a spreading stiff-branched shrub, with small heath-like foliage. The flowers are borne in profusion, clothing the ends of young branches for several inches long. Each blossom is a third of an inch across, of a bright yellow, with a red eye. It merits a place in every greenhouse. (Figured in *Magazine of Botany.*)

BERBERIS WALLICHIANA. (Synonym B. atro-virens.)—Dr. Wallich discovered this species in Nepal, subsequently Mr. Lobb sent it to Messrs. Veitch's, and about the same time Dr. Hooker discovered it on the Eastern Himalaya, and sent it to the Royal Gardens of Kew. It is likely to prove quite hardy. It is an upright shrub, which in its own country grows from six to ten feet high. Plants, however, even ten inches high will bloom very freely. The flowers are of a pale yellow colour. The leaves are lance-shaped, two to three inches long, spiny. A neat shrub. (Figured in *Bot. Mag.*)

Cælogyne ochracea.—An orchid from North-eastern India, which was introduced into England by T. Brocklehurst, Esq., of the Fence, near Macclesfield. Each flower is two inches across, white, blotched with ochre-yellow, and very fragrant. (Figured in *Bot. Mag.*, 4601.)

Cerasus ilicifolia.—Evergreen Holly-Cherry. A handsome *evergreen* bush, or small tree, quite hardy. The leaves are waved and spiny as the Holly, and has white flowers similar to the Bird Cherry, produced in spikes. It has fruit resembling a small cherry. It deserves a place in every shrubbery.

Cestrum Warczewiczii. — A greenhouse shrub from Central America. Many of our readers know the C. aurantiacum, which bears its numerous large panicled heads of orange-coloured tube-formed flowers; this new species is very similar, but its blossoms are of a rich deep yellow. Both species are very ornamental, and merit a place in every greenhouse.

Ceanothus verrucosus.—Mr. Hartweg sent seeds of this pretty hardy evergreen shrub from California, to the Horticultural Society. The plants in the Royal Gardens of Kew have stood uninjured in the open air in the Arboretum during the last two winters. The plant in the open air is four feet high, much branched, The leaves are oval, nearly an inch long, dark green. The flowers are borne in corymbous heads at the ends of the shoots, of a pale purple-blue. A very pretty shrub, which is well worth possessing. (Figured in *Bot. Mag.*, 4660.)

Cistus albicans.—This is an upright-growing evergreen shrub, bushy, a yard to four feet high, blooming most profusely. Each blossom is three inches across, white, with sulphur centre.

Cistus maculatus.—The leaves are neat, small, an upright-growing branching shrub. The flowers are of a rich golden yellow. Each petal has at its bottom a dark velvet spot. The five spots on the bright yellow ground has a very pretty effect. Each blossom is an inch and a half across. It merits a place in every shrub border.

Cistus tauricus.—A bushy shrub, bearing a profusion of lilac-purple flowers, each blossom being two inches and a half across. Very pretty.

Cistus venustus.—A very bushy spreading shrub, with deep green, medium-sized foliage. It is a profuse bloomer. Each flower is nearly four inches across, pure white, and at the bottom part of each petal there is a large spot of *bright red*. It is very neat, and deserves to be in every shrubbery.

Cistus formosus.—An upright-growing shrub, two feet high, with small foliage. Each blossom is two inches across, yellow, with five dark spots. Very neat and pretty.

CISTUS VILLOSUS.—A spreading bush, with sage-like foliage. The flowers are of a rosy-lilac colour, each three inches across. Very pretty.

We scarcely need add, that the old Gum Cistus is a fit companion for all the above; no shrubbery ought to be without it. There is a large clump of Cistus in the pleasure ground at Kew, which has been for some time in beautiful bloom, and likely to continue for a length of time.

CYNOGLOSSUM MONTANUM.—A hardy herbaceous perennial, blooming very freely. The flowers are produced in long racemes, of a bright blue. It ought to be in every flower-garden.

DENDROBIUM FARMERI.—A delicate and lovely orchid, sent by Dr. M'Clelland from the Calcutta Botanic Garden to W. G. Farmer, Esq., of Nonsuch Park, Surrey. The flowers are produced in pendulous racemes from twelve to eighteen together. Each blossom is an inch and a-half across. Sepals and petals of a pale straw colour, tinged with rose. Lip pale straw colour, with the whole disc orange-yellow. A beautiful species. (Figured in *Bot. Mag.*, 4659.)

DRACOCEPHALUM PEREGRINUM.—A hardy herbaceous perennial, one foot high, blooming profusely. The flowers are of a pretty lilac-purple, well deserving a place in every flower-garden.

GENTIANA GELIDA.—A hardy herbaceous plant of much beauty. The plants grow from a foot to half a yard high. The flowers are borne in heads of ten to twelve blossoms in each, and of a rich blue. Each flower is of similar shape to the well-known Spring-Gentian, blue, an inch and a half long, erect. It is a profuse bloomer, and ought to be in every flower-garden. It blooms nearly all the summer.

GLOXINIA VICTORIA-REGIA.—The flower is of medium size, stout, and fine formed. The ground is white, with a blue inside. It is exceedingly handsome.

G. JOSEPHINE DE BEAUHARNOIS.—White, with a stripe of sulphur, edged with lilac at the inside. Very pretty.

G. GENERAL FRANKLIN.—The flower is of good substance and neat form, white, having in the inside a stripe of sulphur, edged with lavender. Very pretty.

G. GRAND DUCHESS HELENA.—White, with a sulphur stripe inside, edged with red. Medium-sized. Very pretty.

G. ARGYROSTIGMA SPLENDENS.—The leaves are large and have *white* veins, very pretty. Each blossom is two inches long and as broad at the mouth, of a blue-purple, with a white stripe at the inside. A very singular variety.

IXORA COCCINEA SUPERBA.—The flowers are of a deeper colour than the old *coccinea*, and the heads of blossoms as large. The petals, however, are much broader, and of thicker substance, each blossom being almost round, having a much superior appearance to the *narrow* petals of *coccinea*. All exhibitors of stove plants should have this variety, as well as the *true* Javanica.

LOASA BICOLOR.—An annual from Central America, which was recently introduced to Germany. It is a branching bushy plant, about half a yard high. The flowers are white, with a scarlet stripe, borne in terminal racemes.

LONICERA FRAGRANTISSIMA.—Mr. Fortune sent this Honeysuckle from China to the garden of the Horticultural Society. It is a *sub-evergreen* hardy shrub, bearing small white flowers. Each blossom has a short tube, and the expanded mouth is nearly an inch across. A plant trained against a wall in the garden of the Marquis of Salisbury, at Hatfield, has bloomed this season. It commenced flowering in January. The blossoms are exceedingly fragrant, combining the richness of the perfume of orange blossom with the delicious sweetness of the Honeysuckle.

ONCIDIUM CUCULLATUM.—An orchid from Central America, in Mr. Brocklehurst's collection. The flowers are produced in a raceme of from six to eight inches long. Each blossom is an inch across. Upper petal and sepals of a chocolate-red, with a stripe of greenish-yellow along the centre. Lip large, two-lobed, violet, spotted with purple. Very curious and beautiful. (Figured in *Paxton's Flower Garden*, 87.)

PASSIFLORA ALBA.—A stove species from Brazil. The flowers are pure white at the upper side, and green underneath. Each blossom is about three inches across. It will produce a pleasing contrast when grown along with the high coloured ones. It fruits very freely.

PENTSTEMON HIRSUTUM.—Grows about fifteen inches high, bushy. The tube of the flower is two inches long, lilac at the lower part and white above, quite hardy.

PHLOX DRUMMONDII MAYII.—It is a bushy plant, blooming profusely. The flowers have a pure white ground. Each petal has a *very broad* feathery-edged stripe, of light purple, which is margined with white. It is a very beautiful flowering variety, which blooms for a great part of the year. It has been termed "the ever-blooming." It does well either in pots in the greenhouse, or in the open bed.

RHODODENDRON LEPIDOTUM. THE SCALY.—This is one of the seedlings raised at the Royal Gardens of Kew, from seed which Dr. Hooker sent there from Sikkim-Himalaya, named *R. eleagnoides*, and as such is figured in the splendid work on the Rhododendrons with dark purple flowers, and also with deep yellow flowers, looking like those of a *Helianthemum*. The present plant bloomed in the greenhouse. The leaves are about an inch long. Flowers of a dingy-purple, with a yellowish short tube. Each flower about an inch across when fully expanded. (Figured in *Bot. Mag.*, 4657.)

THYRSACANTHUS RUTILANS. (Acanthads.) It is a stove shrub introduced to the Continental Gardens from Central America, by Mr.

Linden. The leaves are five inches long by two broad. The flowers are produced in drooping racemes, about twenty on each; they are tube-shaped, two inches long, of a brilliant crimson, much like the scarlet trumpet honeysuckle blossoms. It is a valuable acquisition, and appears likely to make a fine *exhibition* plant.

HARDY ANNUALS FOR ORNAMENTING THE GREENHOUSE EARLY IN SPRING.

BY ALPHA.

During the last three years I have had my greenhouse beautifully ornamented, amongst other things, with the fine blue Nemophila insignis, and the lilac and crimson spotted Schizanthus pinnatus, and S. pinnatus humilis. Only having in the blues, Hyacinths, and not a lilac, at such early season, I was led to try these two pretty blooming plants, and they prove a most valuable acquisition, the plants producing a mass of beauty. My mode of management was as follows:—

I sow the seeds the first week in August in sixty-sized pots, in a compost of rich loam and sandy peat, equal parts, and one-fourth of the pot is filled with drainage. The seeds being sown, the pots are placed either under a hand-glass, or in a spare seed cucumber frame, shading from sun till the plants are up, and as soon as up the glasses are taken off, and the plants have the benefit of the open air. But a few seeds are sown in each pot, and when the plants are up, all are taken away except three. Therefore the *Nemophila* renders itself a twofold acquisition, in its colour and its easy culture. I sow the seed of it and the *Schizanthus* at the same time as the Mignionette, viz. the beginning of August, under hand-glasses, removing the glasses as soon as the plants are above the surface. When the plants are a good size, I pot them into 60's, one in a pot, if strong, but sometimes three; and I give them a good watering over head, and place them in any sheltered situation, but fully exposed to the sun. About the middle of October, I take the strongest, and repot them in 48's, and tie up the branches to five or more sticks in each pot; I then place them in a cold pit, giving them all the air that is possible. About the beginning of December some will require to be shifted into 32's, to be in flower in February, and the others I shift in succession in 24's. When I shift them into the pots I intend them to flower in, I stick in four willows at regular distances round the pot, and, bending the two opposite, I bring them together at the top in the form of a balloon; those in 32-pots about two feet and a half above the pot, and those in 24's three feet. I then put hoops of strong wire round the willows, the first six inches above the pit, the other eighteen inches above it, securing them firm to the willows. I then tie fine threads of matting at regular distances between the two hoops, to train the shoots to which, when they reach the top, I allow them to hang down on the other side. The reason why I train them in the manner described is this:—if trained on straight sticks, as soon as they get to the top they break down, not being able to support themselves, and thus leave all the top part without any flowers.

Another way, is not to tie them up at all, but let them hang down all over the pot. In doing them this way I keep them on shelves, to prevent their damping off. In placing them in the greenhouse, the pot should be placed above the height of the visitor, it being unsightly, not having many flowers near the roots. Also stakes can be driven into the border of the conservatory, and pots placed on the top, the shoots hanging down and covering the stake. The plant has in this manner a fine effect; in a word, it has only to be seen to be admired.

Last August I sowed seeds of Brachycoma iberidifolia, and have had fine pots of them in bloom, both blue, purple and white, since the middle of April, and they are likely to continue all the summer. Their pretty daisy-shaped flowers have a charming appearance. I also sowed seeds of Leptosiphon androsaceus, and have had the plants in bloom from March up to the present, the profusion of their lovely rosy-lilac flowers are very ornamental. The young plants were treated in potting and situation as the Nemophila and Schizanthus. They require but little labour, and amply repay for any.

THE PASSIFLORA EDULIS.

BY J. B., ROYAL GARDENS, KEW.

A FINE plant is grown in the stove in these gardens which, in its blooming and fruiting state, is the admiration of all beholders. It is well deserving of more general cultivation, were it only for its neat-formed, large, pendulous flowers. The varied colours of red, white, green, and black, in each blossom, render it peculiarly beautiful, and entitle it to a place in every hot-house, vinery, &c. The plant here is trained lengthways across the house to a trellis fixed near the glass roof, and I have noticed, both in the Royal Gardens and elsewhere, that the plant blooms and fruits better so trained than when allowed to proceed upwards along the rafters only. When fruit is required, the blossoms must not be sprinkled over with water, and each must be carefully impregnated to secure a crop. After the blossoms drop off, the plant may be duly syringed, which promotes the growth of the fruit. For persons that have the convenience, a pine stove is an agreeable situation; plants grown in pots, and plunged in the bark pit, and trained to the wire trellis near the glass, is deemed a congenial aspect.

The plant seems to require straitening for pot room, in order to throw it into a prolific bearing state, adding to that a copious supply of water in the growing season (avoiding the flowers, as above stated), which should commence about March, in order to get the fruit ready in good time. The plant succeeds well in a light, rich, loamy soil.

It is easily propagated, either by seed or cuttings, the latter being preferable, in order to bring it sooner into a bearing state; two years' old plants being calculated to bear profusely. The fruit, when ripe, is about the size of a hen's egg. The colour is of a dark brownish purple. The shell is thick, hard, and useless. The inside resembles the jelly of a gooseberry, excepting the colour being yellow, and the seeds much larger. The flavour seems to have a three-fold property combined, and is admirably adapted to the palate of persons in general. It well merits a place wherever practicable.

PROPAGATING BOUVARDIAS BY CUTTINGS OF THE ROOTS.

BY A FLOWER GARDENER.

I SCARCELY need to remark that this genus of flowering plants is one of the most lovely. Their beautiful trumpet-shaped flowers, borne in pendulous heads, of rich red, crimson, scarlet, and yellow colours, are highly ornamental. Whether they are grown in beds, in masses, or as single specimens, either in-doors in pots, or grown in the open ground in the flower-garden, they are alike beautiful. I now have plants which have been duly formed during the last three years, from three to four feet high, regularly branching from the pot to the summit, and the branches loaded with the heads of bloom. All the tribe merit a place in every greenhouse, sitting-room, or flower-garden. I grow them in equal parts of rich loam, sandy peat, and leaf-mould, having a good drainage. The plants require little care, and amply repay for any attention. I propagate them both from half-ripened young shoots, inserted in sand, or, which is far easier, by the following method:—I fill some large fruiting pine-pots with good fresh mellow loam, well blended with either thoroughly-rotten dung or vegetable mould. I plant my roots all over the pot, beginning in a circle round the outside, opening the soil and planting them with my finger, and continue filling up one circle within another, till I finish in the centre of the pot, or pots, leaving no more of the roots visible above the surface than just the top. I then water, and place them in a hot-house, at from 60° to 70° of heat by night. As soon as the shoots get to between four and five inches high, I transfer the plants singly into pots of a small size, and by degrees harden them after they have got established. When they have made some progress, I plant them out into a bed four feet wide, eight inches between the rows, and four inches in the row; where, if the soil be good, many will soon be in flower. I pot them again before frost, and treat as done to older plants.

TREATMENT OF THE GUERNSEY LILY.

BY AN OLD PRACTITIONER.

THIS delightful flowering Amaryllis is not usually grown in England in that state of vigour and perfection of which it is capable. I have seen them more than double the size of those which are seen in Covent Garden, or either at the Royal Gardens of Kew or the other public gardens in or about London. The following method of treatment I have proved to be signally successful with it.

In this country we usually receive the bulbs from Guernsey in July or August; therefore, against the time of their arrival let a compost be prepared for their reception, consisting of good light loam, rotten leaf-mould, and well-rotted old manure, in equal parts, having a liberal sprinkling of white sand. This compost should be formed, and the whole turned over at intervals and well mixed, for at least a year before it is wanted. Strong earth should be avoided, for Guernsey is a sandy soil, or inclinable thereto, where they grow and flourish in perfection; this in some respect has taught us their true culture, and experience demonstrates the practice to be right. The bulbs being arrived, and the compost prepared, let a sufficient number of pots of the size of those common for Auriculas be in readiness, according to the number of the bulbs; fill the pots with the compost, and plant a single bulb in each pot. These pots are designed to form a bed, and having marked out a place, set them in rows of what breadth you please, so that they can conveniently be managed; let the pots be joined close to each other, and fill the cavities between with any common mould; then hoop the beds, for the conveniency of covering them when too great a quantity of rain falls; for by thus plunging the pots, the roots will be kept so cool and moist as to require little or no watering, which is very injurious to these plants. In September and October the flower-buds will show themselves, though not every one; for this reason they should be planted in pots, that the flowering sorts may be collected and placed together, to form a general blow; for this purpose let a shed be prepared for their reception (an Auricula stage will be very suitable); such shed or stage should be in an open exposure, and guarded from violent winds, but where they can have the benefit of sun and air. Gentle watering should now be frequently given, and the shed should be uncovered in fine weather, and constantly covered in wet, otherwise the beauty of the flowers would be much diminished. In hot weather, also, they should be screened from the heat of the sun, for this will hasten their decay. With these precautions, the flowers will exhibit their beauties for a long time. Although I recommend the plants to be placed as described, I beg to observe, they may be placed in the greenhouse or sitting-room, doing it just when they are about to expand their flowers, as they have been previously grown slowly, and in proportion have become vigorous, the blossoms will be of the proper size, but the period of flowering will be shorter. The beauty of superb specimens amply repays for any attention given.

ON PROPAGATING ERICAS FROM CUTTINGS.

BY MR. JAMES SMITH, PROPAGATOR IN BELVIDERE NURSERY, PARIS.

Not having observed any particular instructions on this subject in your Magazine, and as we annually increase our stock of Ericas, *ten thousand at least*, I therefore forward you the mode of operation we pursue.

The general season of putting off cuttings is from the middle of April to July, as the young shoots are then properly ripened for the purpose. I must observe, however, that *whenever* the young wood is become somewhat firm, it is in a proper state to strike root, and may be put in the cutting pot.

By a series of practical experiments, it has been found that the old wood of Ericas, as well as many other plants, is by no means calculated to produce roots; and having *proved* that the young wood succeeded best as cuttings, the only thing to be looked for was a warm, open, yet partially retentive medium best calculated for them to strike root in, and sand is found to be the best. A good deal depends, in my opinion, on the choice of sand for this purpose; many prefer the whitest and finest they can procure; at all events *pit-sand* is the most proper; but, from recent observations, I am inclined to think that its goodness does not depend so much on the colour as the texture, a lively vegetating sand being, in my opinion, preferable to that of a dead, fine, binding nature, be it ever so white; but it should be a pure sand, untainted with any mixture whatever. The manner of using it is to have the pot well drained as usual for cuttings, and then filled with sandy peat within an inch of the rim, which must be pressed pretty tight so as not to sink much afterwards; let the remainder be filled with the sand and well levelled at the top, being also pressed tight; the whole should then get a good watering to settle it before the cuttings are inserted. Now we proceed to make the necessary quantity of cuttings to fill it, and the sand will be soaked sufficiently, and fit to receive them by the time they are ready. *Strong, luxuriant*, or *leading shoots* are not chosen, as from their redundancy of sap they are exceedingly liable to damp; the ends of the lateral or side shoots are, by experience, proved to answer infinitely better when selected with judgment, so as care is taken to reject any that have in the least degree attained a *hard* woodiness of substance, or that cut wiry and tough. They need not exceed an inch in length, two-thirds of which is to be divested of its leaves, and finished by a clean horizontal cut at the bottom; but in taking the leaves off, it is necessary to be careful not to injure the bark of the cuttings by paring them too close, but rather to leave a part of the footstalk attached to it. When a sufficient number is ready, we have them immediately inserted in the sand with a small neat dibber, something about the size and shape of a goose quill; they are pretty well tightened in the sand, and should have a moderate sprinkle of water to settle it about their stems. A proper glass being previously chosen, when they have stood about half an hour to drain and settle, it is set on, pressing it gently on the surface so as to make it perfectly loose. When this business is performed in hot weather, the pots are plunged in some cool shady situation, where they can be conveniently shaded when requisite; an exhausted hotbed, with a frame and good lights on it, answers very well; or otherwise the north side of any low wall or hedge where they are a little sheltered from the noonday sun, and have the benefit of it morning and evening; in either place the pots are plunged up to the rim in old tan or saw-dust, and in the latter they also require to be covered with large cap-glasses over the small ones. When potted and watered they are set in small box frames on the kirbs, or other convenient places in the pit for a few days, and shaded until they have established themselves in the fresh mould; as soon as they have taken to grow freely, they are removed to the greenhouse, but not exposed to the open air entirely at first, as it might do them a material injury; on account of which the lights over them are kept closer than usual for a few days.

MISCELLANEOUS SECTION.

BORONIAS.—All the species are neat growing shrubby plants, and when in bloom are very pretty. They merit a place in every greenhouse. The *pots* in which they grow, should always be kept *clean* at the outside; if the pores be closed up by a green coating, &c., the plants will be sickly in proportion, and ere long will perish. The *drainage* should be one-fourth the depth of the pot, it must consist of a broken pot, over which a layer of chopped moss must be placed to prevent the compost choking up the potsherds, so as to prevent the water properly passing away. The *compost* must consist of good turfy sandy peat, which has been obtained from its original moor for several months, and been kept in a situation where it has freedom of air and rain, one-half, which must be well chopped up, and retain its openness, the pieces being left as large as marrow peas up to common marbles. The other half must consist of bits of charcoal and well decomposed (two year old) cow-dung, pot, and well decomposed leaf mould, in equal parts. These being well mixed, form a compost in which the Boronias grow most admirably. Plants sometimes perish *suddenly*, this will be occasioned by either a *want* of water, or when grown in a *close* soil that retains the water, thus the soil becomes sour, and injurious to the plant. To form the plants bushy, pinch off the heads of the shoots to cause the protection of laterals. A *free* admission of air is essential to its well doing.—(*A London Exhibitor of Greenhouse Plants.*)

DRYING SPECIMENS.—Noticing that one of your correspondents requests additional information on this process, I beg to state, he may take most of the *plant* specimens out of the paper they have been dried in for three days, but the *delicate* ones after being in twenty-four hours; he must then place them in dry paper, having a couple of *quires* under and *one sheet* over, then proceed to iron them with a common smoothing iron, moderately hot, by this process he will find the *colours* preserved in a much superior degree than by the method which has long been in common use. I have a large collection, made in Italy and the south of France, mostly dried in this manner, and many dried thus in 1835, are still perfect in their colours; even the common Broom (Cytisus scoparius), which usually turns black (both blossom and leaf), and the flower of the blue Campanula, which becomes white, perfectly retain their colour when dried in this manner. Care is required to have the iron sometimes less hot, and somtimes more so, according to the different sorts of plants to be acted on; but this must be learned by experience. This process of drying prevents the necessity of dipping plants, such as Heaths, which have a tendency to cast their leaves in the drying, into scalding water, or any other mixture, as the hot iron effectually detroys the vitality at once. It has been found useful to lay silver paper, dipped in a strong solution of alum, on the specimens.—*Clericus, Middlesex.*

PROFESSOR FORBES'S LECTURE, *June* 3.—On this occasion Professor Forbes entered into an investigation of the general features of the plants considered as constituting a *genus*. He observed, that if we go into the fields and collect a number of plants, they would be found to agree in certain minute and general features, and a certain number would constitute what botanists term a genus; which was simply an assemblage of species, but each having a certain peculiar collective character of its own. He remarked that the term *species* had been explained by him more particularly, at a previous lecture, as being the assemblage of descendants of an individual plant, the seed of which would not produce individuals of another species, or presenting different specific characters. The scientific name of each species indicates the genus as well. Thus in the case of "Erica Cavendishii," Erica forms the generic name, and Cavendishii the specific name. The substantive (Erica) is used to designate the genus, and the adjective (Cavendishii) to express the species. In this case the specific name is not given merely in honour of a distinguished patron of botany, but for convenience in arrangement. It was next observed that different botanists gave different names to the same plants in published descriptions. Thus it was not unusual to meet with instances of one botanist giving a name to a plant that had already been described by some other botanist under a different name. The usual course, however, was to adopt the name that had been first given. The Professor next entered more particularly into the consideration of the term "genus" in its relation to tribes, families, orders, and classes, remarking that these terms were all used to express the several groups into which plants had been arranged, and that in speaking simply of a group of species the word "genus" was used in a restricted sense. In speaking of a certain Heath, as *Erica vagans*, for instance, it was not meant to make any reference to the higher classes, but only to speak of it with reference to its genus and species. He then illustrated this part of his subject by referring, at considerable length, to the generic character of a Buttercup, as given in one of the Manuals of British Botany, pointing out the several parts which combined to distinguish it from any other plants with which it is allied. In the diagnosis of this genus, as given by botanists, we find, said the Professor, that the calyx is composed of five (rarely three) sepals or outer whorl of sepals, and that they are separate. Then, again, the petals are stated to be five, rarely numerous, with a nectariferous pore at the base. Here it was shown, by means of diagrams, that the petals of this genus differed from most others in the same group by having its nectariferous pore covered by a scale, which is found to be present in all species of Ranunculus; and though other plants possessed the nectariferous pore, in none of them it combined with the features that accompanied it in this case. Attention was next drawn to the carpels, which, it was observed, were arranged in globular heads, and not bursting. The stamens and style were said to be "numerous"—a term used by botanists when the number of these organs was above ten or thereabouts. The Professor next explained that all the generic characters were taken in this way from the different parts of the floral organs, and not, as in species, from the leaves and similar trivial features. He next noticed the points of difference between a genus and a tribe, explaining that the latter was simply a higher group of plants, comprising different allied genera, as a genus included different species. He pointed out the relation between the Mousetail (Myosurus) and the Ranunculus or Buttercup, stating that these two genera differed from each other in certain particular characters, but agreed in others, as in their imbricate æstivation (a term which he explained to mean one of the modes in which the leaves are arranged in the bud), also in the arrangement of the carpels, those of the Ranunculus forming globular heads, and of the Mousetail a long slender fasciculus, like the tail of a mouse —hence its name. Both these genera were quite different; but because they agreed in certain essential features, they were grouped together, and were said to belong to the same *tribe*. The Professor next adverted to the groups of plants forming natural *orders*, as Geraniaceæ, Papilionaceæ, and others, which were marked by certain peculiarities of structure, but which were all arranged according to the same plan. It was observed, in reference to those having pea-blossom flowers, that the terms Leguminaceæ and Papilionaceæ were employed by different botanists to express the same group, which, besides having this peculiarity in the form of the flowers, also agreed in having their seeds in pods. The group of Composite plants was next noticed. This group, it was remarked, contained several hundred genera, and about 19,000 species, all agreeing in certain general features, and of which the Thistle, Cineraria, and Dandelion were named as examples. The plants in this group were sub-divided for the sake of convenience into other groups, such as the Flosiculose, the flowers of which division consisted of a number of small distinct tabular flowers, or florets, arranged together in the form of a head. Of these the Dandelion and Lettuce were cited as examples. In certain other genera of the same large group, the central florets only were found to be entire or perfect; those of the circumference or ray wanting the anthers. The mode of ascertaining the generic character of a plant was then shown by reference to several specimens on the table. In particular, the flower of an Iris was examined, and its different parts explained. Here it was found, after removing the two whorls of outer segments, three of a smaller size remained in a position interior to the stamens: these apparent petals were in reality the stigmas; and in this genus, from their peculiar form, they were called *petaloid*. Botanists, it was remarked, laid great stress on this character, as well as the reflexed position of the petals forming the perianth. As another illustration, the structure of the Lupin and its generic characters were pointed out and fully explained. The Professor then concluded his lecture by a few interesting observations on the distinction between a Geranium and Pelargonium, the object of his discourse throughout being to illustrate by familiar examples the principles upon which natural groups, and especially those restrictedly termed genera, are defined by botanists.

August treatment with Pelargoniums.—The cut-down plants of July will now have pushed sufficiently at the eyes to be shaken out and disrooted, and with a sharp knife take off all straggling roots; repot them into some open soil, with two inches of drainage at the bottom of the plants, potting them into 5 or 6-inch pots according to the quantity of roots, that is, if they were previously in 8-inch pots; keep them in a close frame or house till they get established, just damping them over head with a fine rose three or four times a-week. As soon as they have recovered from the shift, air may be abundantly given night and day, sheltering them from heavy rains, and keeping them clean from green fly. *Cuttings.*—Now is the time for making a foundation for another season, that is, when plants are cut down: continue to cut down plants as they go out of flower.—(*Dobson's Treatise.*)

Red Spider.—The recent dry and very hot weather has been favourable to the progress of this destructive insect, and many complaints relative to its ravages in collections of in-door flowering plants have been sent us, as well as information solicited, as how the Red Spider could be destroyed without damaging the plants. We have replied by letter to all applicants, but as others may have still to contend with the adversary, we repeat here what we have stated in previous parts of our Magazine; viz., let a mixture of lime and sulphur be made to the consistence of the usual whitewash, and where there are brick or other flues, or hot-water pipes, let them be washed over with the mixture, doing it towards evening; after the sun is off close the house or pit, and let the flue or hot-water pipe be heated to a *gentle warmth*, and the fume from the sulphur and lime will be sufficiently diffused throughout the house to destroy all the insects. The following morning early syringe the plants, and let there be a full admission of air to the house all the day, and the succeeding day also. If by any casualty the entire destruction of the insect has not been effected, let a little more sulphur be added than before, and repeat the necessary heating, &c. Guard against having the flue or pipe *too hot.* We never knew the application to fail; and having applied it on many occasions on plant-houses, vineries, &c., we never had either plant or vine damaged by the operation.

Beauty of Flowers.—There is not a plant but on minute investigation will reveal some peculiar beauty, or some exquisite adaptation, to reward the attention bestowed. What we despise as weeds, and condemn as inconspicuous, are only so in relation to our superficial view.

For a garden we select such plants as are suitable, on account of the size and brilliancy of their flowers, or of the unusual elegance of their foliage. But in a landscape individual beauty is subservient to general effect. Even a mass of hemlocks or nettles is not without its relative beauty. The garden is cultivated for the sake of some favourite flowers, often unjustly, to the disadvantage of many that cannot be confined within artificial boundaries. For a landscape, *foliage* is the principal requisite, and thus every so-called weed has its appointed service. . . . . . Some flowers are common to both garden and country. Violets, Primroses, Snowdrops, Lilies of the Valley, &c.,

are as sweet in their wild haunts as in the protected enclosure. Many not found in the garden are splendid in their wild independence, such as the Mullein, Fox-glove, Viper's-bugloss, Speedwell, and the curious tribes of Orchis. Daisies, Buttercups, Anemones, Cowslips, Harebells, Vetches, &c., are more welcome in their wild habitats.

Varied beauty is thus spread over the surface of the habitable globe, and cannot fail to delight every mind that is not blighted by the wretched conventionalities of the world, benumbed by cold utilitarianism, or besotted by selfishness.

> " Nature never did betray
> The heart that loved her; 'tis her privilege,
> Through all the years of this our life, to lead
> From joy to joy; for she can so inform
> The mind that is within us, so impress
> With quietness and beauty, and so feed
> With lofty thoughts, that neither evil tongues,
> Rash judgments, nor the sneers of selfish men
> Shall e'er prevail against us, or disturb
> Our cheerful faith, that all which we behold
> Is full of blessing."—WORDSWORTH.

(*Beauty of Flowers in Field and Wood.*)

AUTUMN AND WINTER-FLOWERING PELARGONIUMS.—For autumn flowering I have found the following the most desirable, being free-blooming kinds, and strong growers:—Forget-me-not (Lyne), a fine high-coloured flower, and one which will be found to give satisfaction to all who grow it; it will also force well in the spring. Meteor (Beck), a showy flower, and well adapted for late purposes. Negress, a dark flower, and very free; also adapted for spring forcing. Sultana, or Perpetual, of dwarf close habit, and free flowering. Gauntlet, a fine large bright flower; also well adapted for early spring forcing, as it will stand a very high temperature without going blind. Selina, a bright red, and beautiful variety; this is also well adapted for early spring forcing. Lady Mary Fox, a bright red; this, with a little warmth, will be found to flower all through the winter, and, as a bouquet flower, is most desirable; it will be found a beautiful bedding plant, if cultivated to that end, being a most profuse bloomer. Quercifolia coccinea, a bright scarlet-flowered oak-leaved variety; this will force well, and is invaluable for bedding purposes. Duke of Cornwall, an established favourite, of fine high colour, and good trusser; this may be forced successfully with the second crop in spring. Mrs. Johnson (Dennis), a flesh colour, and most profuse bloomer; will be found to contrast well with the other colours. Laneii, a variety which should be grown by all who require winter flowers, as it will flower through the whole of the winter, and stand a high temperature in the spring. When the beauty of the plants is not so much an object as the flowers, they should not be cut down, or re-potted, when housed early in autumn. A few of the fancy varieties will be found distinct and free bloomers:—Anais, Jenny Lind, Fairy Queen, Queen Superb, Statiaski, and Sidonia. The following, for early forcing, will stand the most fire heat:—Admiral Napier, red; Alba multiflora, white; Surpass Admiral

Napier, red; to be followed by General Washington, red; and Colleyanum, purple; with such others as I have enumerated above. Scarlets must not be neglected, they are beyond all others; and now the collection of this lovely section is nearly all that can be desired as to form, colours, &c.

Hammersmith (near London) Pansy Society's Show.—The following varieties were exhibited, by which list our readers may perceive what are the finest formed and best coloured kinds in the south of England, and they may fully depend on the excellency of the flowers.

1st Collection (*Amateur Growers.*)—Mr. S. Treacher, Wycombe, with Juventus, Duke of Perth, Queen of England, Masterpiece, Lady Carrington, Pandora, Aurora, Timour, Flower of the Day, Royal Visit, Diadem, Duchess of Rutland, Lord Carrington, Maid of Athens, Nimrod, Lucy Neal, Helen, Supreme, Constantine, Thisbe, Almanzor, Iron Duke. Sambo, Kate; 2d, Mr. A. Lane, with President, Climax, Pompey, Ethelred, Royal Visit, Ophir, Matchless, Sir P. Sydney, Maid of Athens, Disraeli, Diadem, Queen of England, Androcles, Mr. Beck, Blanche, Timour, Mrs. Trotter, Elgiva, Helen, Duchess of Rutland, Polyphemus, Aurora, Eustace, Exquisite, Rubens.

Nurserymen: 36 varieties.—Great Britain, Mrs. Hamilton, Robert Burns, Almanzor, Gliff, Duke of Perth, Lady Emily, Euphemia, Thisbe, Seedling, Duke of Norfolk, Sir R. Peel, Adela, Royal Visit, Duke of Rutland, Miriam, Alfred the Great, Privateer, Sir J. Cathcart, National, Morning Star, Pompey, Sir J. Franklin, Sir J. Paxton, Seedling, Diadem, Aurora, Supreme, Sambo, Mr. Beck, Criterion, France Cycole, Seedling, Seedling, Black Diamond, Pandora; 2d, Flowers dissimilar from the first stand were, Laertes, Queen of England, Hercules, Lady Carrington, Grace Darling, Flower of the Day, Pride, Timour, Kate, Ophir, Elegans, Mulberry, Polyphemus, Constance, Constellation, Royal Purple, Royal White, Rotunda, Commander-in-Chief, Masterpiece, Nox, Rubens, Rotunda (Hunt's), Androcles, Lucy Neal, Cowper, Post-captain, Helen.

The following were shown at another meeting on the first stand:—Sir J. Cathcart, National, Sir J. Paxton, Gliff, Diadem, Euphemia, Great Britain (Parker), Duke of Perth, Adela, Pompey, Sir R. Peel, Sambo, Blanche, Mrs. Hamilton, Bellona, Thisbe, Elegant, Rising Sun, Duke of Norfolk, Juventus, Ophelia, Royal Visit, Climax, Queen of England, Rainbow, Alfred the Great, France Cycole, Chieftain, Lady Emily, Supreme, Robert Burns, Caroline, Commander-in-Chief.

Hollyhocks.—These may be propagated by cuttings of the flower stems, if the stems are not too much exhausted by the flowers before the cuttings are put in. Thus, when the flowers are becoming shabby, cut the plants down; and, commencing at the bottom joints, continue to make cuttings on the plan recommended by Mr. M'Millan, until the wood is too soft for that purpose. These should be put in under a frame or handglass, on a very *slight* heat, the soil being gritty sand, loam, and leaf mould in equal proportions. Water very cautiously, but sprinkle the cuttings lightly every day if the weather is fine. The plants are developed out of the accumulation of adventitious matter and buds formed at the base of each cutting.

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

THIS month *is the best time* for propagating plants for turning out into beds next year; they get well rooted, and having the leads stopped, are bushy plants by winter setting in, and are well prepared to stand the effects of it without injury. Examine the effects of colours in your beds, and investigate their combinations and contrasts, so as to improve and vary the arrangement another season. To keep up the interest of a garden, especially if planted on the grouping system, requires some considerable skill and forethought to vary the scene in each succeeding year, so as to prevent the arrangement becoming monotonous. Thus if warm colours prevail to any material extent this season, it would be as well to introduce a majority of cold colours next season, and to edge each bed of the latter with its complimentary warm colour. Indeed, the system of edging beds with contrasting colours imparts a highly interesting feature, especially to such as may be distributed over the lawn without any methodical arrangements.

Florists' Flowers.—*Auriculas*, or *Polyanthus*: seedlings that have hitherto been kept in pans or boxes may now be potted singly in small pots. *Carnations* and *Picotees*: proceed with the layering, which should be completed as *soon* as possible. Water over head with a fine rosed pot as often as necessary. *Pinks*: pipe the second crop of weaker shoots immediately. Plants for next year's blooming are better *planted out now*, or at least as soon as they are fairly rooted. The beds should be made of well-decomposed dung, sound loam, and leaf-soil, equal parts. The reason why we prefer planting at this time is, that the plants get well established, stand the winter better, and lace much more correctly than when the planting season is deferred. *Cinerarias*: as the plants which have been turned out into the open border throw up suckers, they should be carefully removed, potted into small pots, and placed in a cool shady frame until sufficiently established. Sow seed in a light rich soil, and pot off the plants as soon as they have attained sufficient size. *Dahlias*: continued care will be necessary in thinning out laterals as they appear, and securing such as are left against being broken by wind. Lighten up the soil around the plants with a fork, carefully avoiding injury to the young fibres. Towards the middle of the month add a layer, one or two inches deep, of rotten dung around the plants; avoiding such application, however, to all those with large or coarse flowers. *Tulips*: off-sets should be planted towards the end of the month. The bed should, therefore, be prepared, and consist of river-sand and fresh loam in equal portions; plant the young bulbs from two to three inches deep, and let the surface of the bed gently slope from the middle. ***Hollyhocks:*** where increase is desired, as soon as the flowers fade, the stems should be cut down, and the surrounding surface of the soil stirred up, adding thereon a little well-decayed manure; this will induce them to shoot up vigorously, and afford a numerous division, or they may be increased by cuttings. ***Pelargoniums:*** if the plants cut down last month are not already potted, they should be done at once; some of the cuttings, too, which were potted early, may require another shift. Seed should be sown in pots of light rich soil. ***Rose*** budding should be completed as early as possible. ***Pansies:*** continue to propagate, and save seed from the best varieties. ***Chrysanthemums*** should be re-potted into larger pots for blooming, using a rich soil, and giving an abundant supply of water.

IN THE GREENHOUSE, COLD FRAME, &c.

Light is now more than usually important to elaborate and consolidate the juices before the winter arrives; for unless every means is taken to accomplish this, we may expect sad failures during the next winter among our tender and more valuable exotics. To protect them from rain, and to expose them to light, should now more than ever be our earnest study, in regard to choice specimens, especially those which have been recently shifted, and which are in vigorous growth. Almost all the soft-wooded stove-plants that can be grown into large specimens by one or two seasons' growth, like Pelargoniums, may be conveniently treated like that popular tribe; cut them back after they are done flowering; keep them dry for a week or ten days, and then shake them out of the mould; shorten their large roots, and pot them in light rich compost in as small a pot as their roots can be got into. Where a conservatory is to be kept gay all the year round, this class of stove-plants is by far the most useful.

Greenhouses and frames, while they remain empty, should be thoroughly cleansed, repaired, whitewashed, and painted. Cleanliness is not only essential to their appearance and preservation, but to keep the plants in a healthy condition.

BRIEF REMARKS.

SUPERB RHODODENDRONS, AZALEAS, &c.—The exhibition of American shrubs, &c., now in the garden of the Royal Botanic Society, Regent's Park, is a grand display of beauty, and ought to be visited by all who have the opportunity. Only visitors can form a just idea of this splendid display. Mr. Waterer's court presents a very extensive and beautiful display of bloom. Here one of the best varieties of Rhododendrons is to be seen in fine condition, the flowers being remarkable for their rich and distinct colour, while the plant, or rather tree, measures about seven feet through, and is profusely flowered. It is called Eleanor Cathcart, in compliment to the lady of that name. The flowers are of a rich rose colour, and produced in trusses of good shape. At first sight they resemble the flowers of a highly-coloured Geranium, being beautifully tinted, and well marked with deep spots. This variety is certainly one of the gems of the exhibition. The others which we noted as worthy of special mention are the following:—Roseum elegans, a delicate rose-coloured variety, having large trusses of flowers, which are marked with green. Grand Arab, rich crimson, spotted with black; this is one of the most glowing kinds, and the flowers are produced in great abundance. We learn that Mr.

Waterer has the largest plant, with one exception, in cultivation of this—that exhibited here; it is very handsome, and covered with bloom. Album elegans, a fine white, or delicate pink, spotted with green. Atrorubrum, rosy-crimson, of good shape and large truss, a very fine variety. Perspicuum, one of the best white sorts, faintly tinged with rose and spotted with green; it is a most profuse bloomer, and the flowers are large and well formed. Juba, a very fine late rose-coloured sort, having the corollas much spotted: the plant of this (the original) is large and handsome; the trusses, however, are only of moderate size. Luciferum, a beautiful light pink, having large trusses of well-formed corollas; it is a remarkably free-flowering sort. Hyacinthiflorum, double light pink; a singular and pretty variety. Maculesum, pink; of this there is a large standard covered with bloom. Gloria triumphans (Waterer's), of a delicate pink colour. Besides these, many others might be named, did our space admit of it. Roseum elegans, in particular, of which there are many large standards in this division, forms an object of great attraction. Marriageanum (Waterer's), a magnificent crimson, very handsome in habit and the form of the flowers, the foliage also is good; this will doubtless prove an acquisition. Melanthauma (Waterer's): this variety is very remarkable for its dark purple or violet coloured flowers, which are produced in great profusion; as a beautiful dark variety it is unsurpassed. Sun of Austerlitz; a fine specimen of this choice crimson variety was in fine flowering condition. Atrorubens, a very handsome rose-coloured sort, of good habit and foliage. Blandyanum, a glowing crimson, prettily spotted, and very choice. Blatteum, a good purple, shaded with crimson, and having numerous dark spots; the trusses are very large, and, being freely produced, render this a first-rate variety. Captivation, rosy-crimson, with black spots; also an excellent sort, and late in flowering. Nobleanum bicolor, a beautiful rose-coloured variety, having a white throat. The Duke of Norfolk, clear bright rose, and very attractive in form as well as colour. Vestitum coccineum, a most superb rosy-crimson, beautifully spotted. Leopardii, rosy-lilac, intensely spotted with crimson; a very large and fine variety. Pardoloton, a dark crimson-purple; very showy. Magnificens, delicate rosy-pink, and prettily spotted. Victoria, a beautiful scarlet variety, shaded with purple, having large and compact trusses. Of those of still more recent introduction, we may mention Lefevreanum, a superb violet-crimson, with black spots. Rhodoleucops, delicate rose, with white throat. Martinii, purplish-crimson, with dark spots. Melanostichilum, light rose, intensely marked with chocolate spots. Johnsonii, a dark scarlet, and well marked, having a large truss, and being a very profuse bloomer. Mr. Baker's collection is still in fine condition. There are several large and profusely-flowered examples of Catawbiense, a beautiful light-rose variety, besides one or two seedlings of the same kind, but different in colour, and of considerable merit. Here, also, many fine Azaleas are in high perfection, such as Gloria Mundi, a rich orange-scarlet variety; Mammoth, a profuse bloomer, and remarkable for its handsome truss of rich rose-coloured flowers; Alta-clerense splendens, a glowing crimson variety, with fine foliage; Bouquet de Flore, rose colour, large and well formed, with dark spots; Maculata grandiflora, a very fine sort, having large handsome flowers, with dark spots and good foliage; Delicatum, a beautiful white, the flowers large and handsome, with light brown spots. Messrs. Standish and Noble's division presented a rich and varied display, the plants, so to speak, having reached their climax. The more noticeable were Elegans, a bright rose-coloured variety; Geranoides, one of the best and most distinct, in the way of Eleanor Cathcart; Metaphor, a fine rose-coloured sort, having large trusses, which are produced in great abundance; Blandyanum, several good plants of this rich crimson variety; Album elegans, a delicate white, spotted with green, the trusses large and handsome; Lord Broughton, deep rose, and finely spotted—a good dwarf flowering sort; Menziesii, delicate light rose, also flowering freely when of a small size; Captivation, of a glowing red colour, of fine bushy habit, and altogether very beautiful: Gloriosum, a delicate white, the flowers produced in great abundance; Towardii—this fine variety is still in excellent flowering condition; Erectum, deep rose, a desirable and free-flowering kind; Illuminator, somewhat like the preceding, and equally good; Antony, fine light rose, the flowers large, and produced freely on small plants, Perspicuum, a beautiful white, one of the very best of the kind; Clarinda, delicate rose, of fine dwarf habit. Lord Carlisle, of a fine rosy-purple colour, distinctly spotted with chocolate colour; the truss is neat and compact, the flowers are well formed, and open on small plants. Nobleanum, lively rose colour, not much spotted; truss of moderate size, but well formed; flowers of good shape, and foliage fine. Albion, rose colour, corollas much spotted and well formed; this is a beautiful variety. Capitatum, lively rose colour, lower petal rather pale, but distinctly spotted above; a very free-flowering variety. Candidum, delicate lilac, large, and spotted with green; a most desirable sort. Sir Walter Scott; at first sight, this, when only partially open, presents two colours, the blossoms when half expanded being rich vermilion, becoming a delicate rose colour when quite blown; it has a very beautiful appearance, the flowers being well formed and distinctly spotted. Geranioides, a glowing vermilion variety, with a dense cluster of very dark spots, almost resembling a blotch on the interior of the upper petal. Towardii, one of the finest of all, remarkable for its large and handsome truss having the outline of a beehive; the corollas are equally well formed, and large. Vervæneanum, a unique double lilac variety. Coriacea, an exquisite white, with brownish spots. One, appropriately named The Dwarf, was only about eight inches high, yet had several trusses of its pretty flowers expanded.

Early Strawberry.—I observe a notice from Ireland of a dish of Strawberries, gathered from plants of Cuthill's Black Prince, in the open air, on the 26th of May. On that day my gardener gathered a dish of the same sort, grown under exactly similar circumstances, under a south wall, from plants put in last autumn. —*A Constant Reader, Sandhurst, Kent, June* 8.

Island of Java.—Observing in your notices of New and Rare Plants that many superb ones come from this island, I send you a few remarks from notes I made when there:—

"This is one of the finest and most fruitful of the Sunda Islands. Its form is nearly that of an oblong square, which is traversed from east to west by a chain of large mountains; these exhibit the remains of ancient volcanos, which are now clothed with the vegetation of many ages. The fine new species of Rhododendron lately introduced into England are inhabitants of such situations. The mountains, in most instances, are covered with almost impenetrable forests, and, with a few exceptions, the soil on them is fertile. Between those of the first, or grand, and those of the second series, are immense plains, some of which are much elevated above the level of the sea, and on these the cold is sensibly felt. They are the most densely inhabited and best cultivated portions of the island. In some parts the heat is oppressive, rising occasionally above 107° Fahr., with from 20° to 25° variation in twenty-four hours. Notwithstanding this, however, taking it altogether, the climate away from the swamps, is healthful and pleasant, the perpendicular sunbeams being considerably cooled by the sea and land breezes. On the tops of some of the mountains it is not uncommon to find the temperature in the months of May, June, and July below 29°, and occasionally even lower, and ice a quarter of an inch thick may often be discovered on the ponds. The two monsoons, the dry and the wet, are latterly not at all regular. The former, during which easterly and south-east winds prevail, generally commences towards the middle of April, and continues until November, and sometimes as late as December. The rainy season is accompanied by westerly winds, and both monsoons by severe thunderstorms, but more especially the wet one. The land is richest near rivers and in valleys, and even near towns, where it is employed in the production of vegetables; it requires very little manure or labour to cause it to yield heavy crops. Java produces rice in large quantities, coffee, sugar, pepper, indigo, cochineal, nutmegs, cinnamon, maize, &c. The latter is grown on the hilly parts, where it is too cold for rice. Maize does not suffer from cold until the temperature falls below 45°, and, on the other hand, no degree of heat is injurious to it. It supplies the natives with the greater portion of their food."—*Clericus.*

Forced Roses in Pots affected with Mildew.—Roses in pots are subject to mildew from a low, close, damp atmosphere in the house or pit, and the remedy is obvious. In such structures, where the atmosphere is in a great measure under the control of the manager, it is his own fault if the internal air is not rendered sweet and wholesome. Whenever the mildew appears, raise the heat of the house, give abundance of air on all favourable occasions, and be careful that there is no more water used than is absolutely necessary to keep the plants growing and healthy. The floor of the house should be kept dry and clean, and every decayed leaf removed. The soil on the surface in the pot should be frequently stirred, to prevent moss and lichens from growing, for these are not only unsightly, but positively injurious, by retaining moisture, and thus giving out a bad, unwholesome, and disagreeable air, or, more properly, miasma, which is offensive to the organ of smelling, and must be greatly injurious to the plants that are constantly exposed to its ill effects. If, notwithstanding all these remedial measures, the mildew still appears to spread, then procure some flour of sulphur, as it is called, and dust it over the leaves affected; the parts that are mildewed will retain it, and its pungent qualities will destroy it; and as soon as that is effected, let it, some fine dry morning, be washed off with the syringe.

Very lately we had occasion to visit an establishment not a hundred miles from London, and were shown a house full of forced Roses, upon which the mildew had made its appearance in great strength, and no wonder! The roots were standing upon a bed of wet sand—the walks were wet and slippery with mud—the house had very little air—and the smell arising from the wet and mud was exceedingly strong and offensive. No wonder the mildew flourished under such circumstances! and we are fully persuaded that the cause why it has prevailed so extensively lately, in some places, on *the vine*, arises from the same circumstance in a great degree; and, until such circumstances are remedied, it will prevail still more extensively.

Let the grower of Roses in pots for exhibition, or for any other purposes, then, be careful to keep the air in his Rose-house sweet, dry, and wholesome, or he may depend upon it the mildew will quickly make its appearance, and render nugatory all the care, expense, and trouble he may have put himself to.—*Cottage Gardener.*

NOTES ON A FEW GOOD POLYANTHUSES, by the Editor of the "Midland Florist," when on a Visit to a celebrated Cultivator in Derbyshire.—Mr. Godwin's Polyanthuses were very strong and in fine bloom. They were grown in large pots, plunged up to the rim in sawdust. Amongst the sorts which were particularly fine were Hufton's Lord Lincoln, a really splendid sort, and, when well grown, comes very nearly up to the standard of a perfect Polyanthus. We have seen this fine sort very well done this season by our friend Mr. Samuel Hammond, of Radford, near Nottingham. As a red variety, certainly the very best was Addis's Kingfisher. This we noticed favourably when sent to us as a seedling for an opinion, and we are glad to find it still maintains its reputation. It trusses remarkably well; we have seen it this season with fifteen fully-expanded pips, fit for any exhibition. Croshaw's Exile was also very good, though in its character partaking somewhat of Hufton's Earl Grey, a slight foxiness being perceptible between the ground and body colours. Cheshire Favourite was extremely well bloomed, and certainly must hold a high position, being a very steady and well-laced dark flower. There are several pots of Bullock's Lancer, a lively crimson variety, nicely laced, but not so large as Kingfisher. Buck's George IV. was very strong and luxuriant, but what it gains in size it loses in neatness; still we should say that this would be a good parent, crossed with such sorts as Lord Lincoln and Cheshire Favourite. Amongst others, there were some strong plants of Alexander, an old sort, which is not often seen in this part of the country. Its rich dark velvet ground colour and bright yellow lacing make it very attractive, but it wants smoothness of lacing and a somewhat better form. Ordoyno's or Bowley's Bolivar was large, but coarse. The ground colour of this flower is too large in proportion to the yellow, as was the case also with Lakin's George Canning. Mr. Godwin gave us to understand that his plants were grown in one-half decayed turf, the other half being rotted leaves and sharp sand, in equal proportions. He considers that they should be kept from the direct rays of the sun as much as possible; and when expanding their blooms, an occasional dose of weak liquid manure, made with sheep-dung, he finds of great service. Simple as these directions are, his flowers were amazingly fine, and the plants in the most robust health imaginable; and we are convinced that much of the imaginary difficulty of growing these plants in the south of England would vanish were his method followed.

VENTILATION.—Attention has been recently drawn to a new and simple process of ventilating public buildings by means of tubes, down which a partition is made to run from the top in the roof to the bottom in the interior. When these tubes are properly adjusted to the size of the building to be ventilated, and impure air accumulates in the interior, it is found that the impure air makes its escape by one division of the tube, while a proportionate supply of fresh air flows in by the other. Dr. Penny, we believe, was the first to suggest the applicability of this principle (called the double current) to the purposes of ventilation; but the credit of applying it successfully to public and private buildings is due to Mr. C. Watson, of Halifax, who has not only brought it before the public, but invented the contrivance by which the descending air is broken inside, while outside the ventilators are sufficiently protected against any injurious effects of the weather. With a view to test its efficiency, it was lately subjected to trial on a small scale. A large room was closed for some time, and the company allowed to feel the progressive deterioration of the air. The valves were then opened, and immediately the tubes commenced their respective operations—the rarified air ascending by the one side, and the external atmosphere descending by the other side of each of the four tubes. No draught was perceptible upwards or downwards; and so gentle and perfect was the operation the law of Nature brought into action, that, ere long, it was matter of every one's experience that a very favourable and refreshing change had taken place. This contrivance is undoubtedly true in principle. In a former volume of this journal we made some remarks on this subject, with reference to producing a current or circulation in the trenches in which hot-water pipes are sometimes laid under the floors of conservatories or greenhouses. Possibly the same principle, if applied to smoky chimneys, would also be a remedy for this domestic trial.

Colours of Flowers.—Mr. Van Buren, in the American Horticulturist (vi., 575), notices, in respect to blue flowers: —1 That a large majority of our native plants, bearing blue flowers, bloom either early in spring or late in autumn, and he inquires,—Do blue flowers require and consume more oxygen than those of other colours? The bruised petals or expressed juice of red flowers exposed to the atmosphere change to a blue colour: is this caused by absorption of oxygen? If so, may not plants consume a greater quantity at these seasons than when the air is in a more rarified state? Or does the intensity of the solar rays alone cause a redundancy of brighter coloured flowers in summer? 2. Wild blue-flowering plants are more frequently found in moist, shaded situations, than in more exposed sunny spots. The colour of many plants may be changed from pale red to blue, by employing "swamp mould," and keeping them in the shade. Pursuing these hints, he suggests that the blue flowers might, by perseverance through several generations, be produced on many plants now producing flowers of other colours.

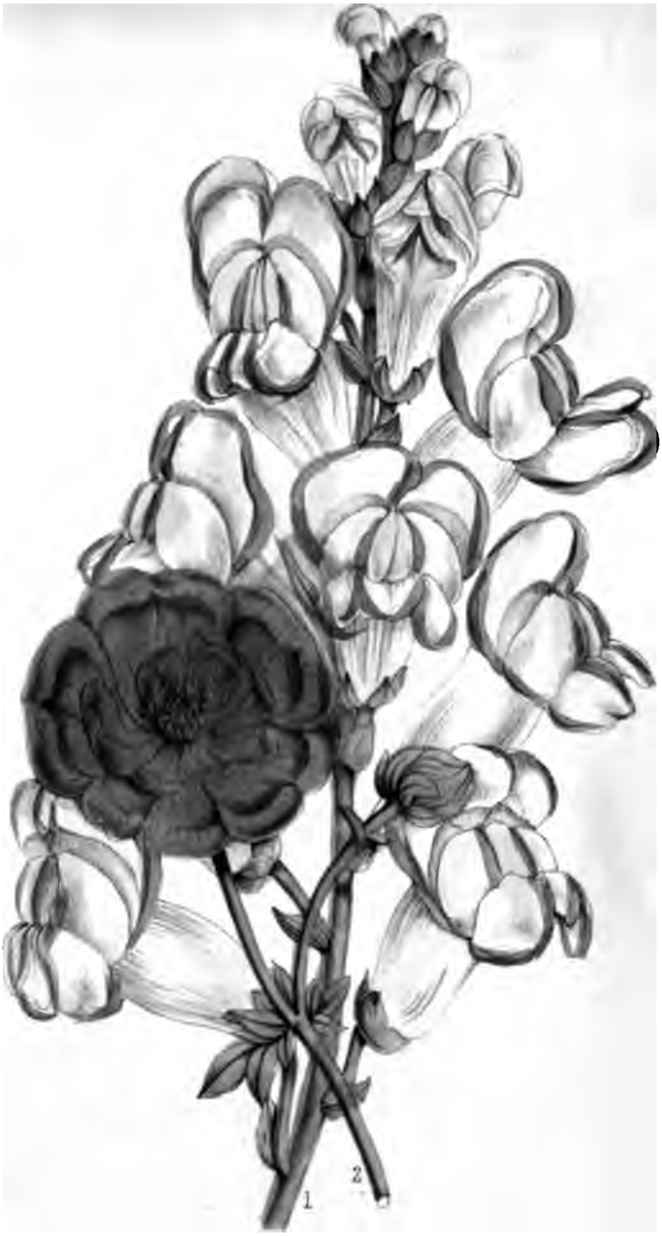
Leschenaultia formosa.—It is not a difficult plant to grow; if you reduce the quantity of loam employed in your compost, and increase the sand, you will improve it. The peat should be *light and full of fibre*; sufficient sand should be added to make the whole mass when well mixed of a grayish colour. The plants at this season should never be allowed to *become dry*; water should be given every day, enough to moisten the earth thoroughly. Let it have a free drainage and good air.

Lagerstræmia indica.—This is one of the loveliest stove-plants when properly treated. There is a neat bushy one in profuse bloom in the Royal Gardens of Kew. It is about two feet and-a-half high, and as much across; and its numerous, large, terminal heads of curled blossoms, of a beautiful rose-colour, have a charming appearance. The plant is easy of culture, readily kept at any desired size by cutting back the shoots after blooming. It requires a winter's rest, in a dryish state, and then repotting early in spring; then it will bloom freely. It ought to be in every hothouse, vinery, &c.

Tree Carnations.—We well remember in our early days being gratified by obtaining a plant of the crimson-flowered Tree Carnation. This kind was then common in the greenhouses in Yorkshire. Now, however, we have in this country many other kinds, all of which are very handsome, and highly fragrant like the Clove. The following are offered to the public at a moderate price:—Atila, scarlet flake. Cassandra, rose. Gertrude, lavender, mottled with white. Incomparable, deep rose, striped with crimson. Jupiter, crimson. La Sermi, blush-white, mottled with rose. Vestatie, scarlet. Le Zephir, purple. Madonna, mottled rose and crimson. Nonpareil, blush-white. Proserpine, large crimson. The Baron, white, mottled with rose on the edge. Titus, dark crimson. Tom Pouce, blush, striped with rose. Union, white, striped with crimson.

This charming class of Carnations blooms in-doors both summer and winter, and are beautiful ornaments.

Self-coloured and Clove-scented Carnations.—Abbess of St. Clair, blush. Fireball, scarlet. Negro, dark purple. Parsee Bride, deep yellow. Purity, white. Queen of Denmark, rich red. Magnificans, rich crimson. These, too, merit cultivation.



1. Antirrhinum Hendersonii.
2. Potentilla Antwerpensis.

SEPTEMBER, 1852.

ILLUSTRATIONS.

1. ANTIRRHINUM MAJUS, VARIETY HENDERSONII.

> "This beauteous family to cares unknown,
> Were born for pleasure and delight alone,
> Gay without toil, and lovely without art,
> They spring to cheer the sense and glad the heart."

The flower is peculiarly formed, singular, and interesting. It has been made the emblem of *presumption*, from the front view of the blossom resembling the face of an animal, and it has from hence received various names, as Lion's Snap, Dog's-mouth, Cat's-eye, Calf-snout. When the sides of a blossom is pressed it opens like a mouth, the *Stigma* appearing to resemble the tongue; on removing the pressure the lips of the flower snap together, and hence it has been named Snap-Dragon.

The A. majus (the greater) is a native of the South of Europe, growing naturally in the fields, plains, &c. It is frequent on the cliffs of Dover, and is now claimed by many as one of the native plants of England.

This species of Antirrhinum is very much cultivated in Russia, for the purpose of obtaining seed, which by expression produces an oil that is nearly equal in excellence to that obtained from olives.

In our own country, however, these handsome flowering plants have long been charming ornaments in gardens and pleasure-grounds; in order to obtain improved kinds, considerable attention has been paid within the last dozen years, in raising seedlings, selecting seed from the best formed, and annually we are favoured with some improved varieties, both in form and colouring; descriptive lists of sixty-five superb sorts have been sent us. The very beautiful, distinct variety we now figure, has been obtained by Messrs. Henderson and Son, of Wellington Nursery, St. John's Wood, who sent it out last Spring. The plant is of a compact (not crowded, but open) neat habit, growing from two to two and a half feet high, and a profuse bloomer. A small bed of it has a most beautiful appearance. Grown as a single specimen, it merits a place in any flower border, and its contrast with a collection of others in a bed is very striking. Messrs. Henderson had a large bed of it, and we carefully examined the flowers, to ascertain if the marking of the blossoms was constant, but every blossom we saw had the pretty and regular marking which our figure represents. The beauty of the flowers, the ease with which the varieties are perpetuated by cuttings, and the interest there is in raising seedlings, alike combine to recommend this tribe of flowers as well deserving attention. They have a pretty appearance when grown on the ruins of buildings, walls, rocks, &c., and being once furnished their continuance may be calculated upon, by a constant new race of seedlings.

2. POTENTILLA ANTWERPENSIS.

This family of hardy herbaceous perennials, is one of the neatest and prettiest the flower garden contains. Like every other ornamental admired flower, the attention of Florists has been directed to obtain improved varieties by hybridising, and within a few years our friend Mr. Plant, of Cheadle, has taken the lead with this lovely genus. Others have followed with success, and we now possess a number of most strikingly beautiful kinds, which merit a place in every flower-garden. Their neat form of growth, profuse blooming, and the long period (from April to November) of their flowering, with the beauty and brilliancy of the flowers of nearly every one, alike contribute to render these plants truly valuable.

The Potentilla Antwerpensis, now figured, was obtained from Belgium. It is of dwarfish habit, and a free bloomer. Its *semi-double*, brilliant orange-coloured flowers, are exceedingly ornamental. It ought to be in every flower-garden.

> " All are for health, or food, or pleasure given,
> And speak in various ways the bounteous hand of Heaven."

NOTES ON NEW OR RARE PLANTS.

Abelia uniflora.—A neat greenhouse shrub, plants a foot high, blooming freely. Each flower is bell-shaped, an inch and a half long, white, tinged with blue.

Alyssum maritimum variegatum.—The variegated foliage is nearly white, as is the flowers, and covering a bed about eight inches high. There had been a number of Enfield's Scarlet Verbena also planted, and now the heads of the Verbena blossoms appear just on the surface of the Alyssum, and produce a most striking appearance; exceedingly handsome.

Azalea amæna. The dwarf crimson Chinese Azalea.—This is a *hardy* dwarf evergreen bush, which in habit very much resembles the well known *Rhododendron ferrugineum.* The leaves are about the size of the common Box, hairy. The flowers are almost bell-shaped, five-lobed, and have that form of double, which is usually termed "hose in hose." They are of a rich crimson, each blossom an inch and a half across, and being produced in profusion, renders this neat dwarf shrub highly ornamental. It succeeds well too in the greenhouse, or pit-frame. It appears Mr. Fortune sent it from China, to Messrs. Standish and Noble, of Bagshot, where it has recently flowered in the open ground. Mr. Fortune stated, "This pretty Azalea was found in a Nursery near Shanghae, and had been brought from the far-famed city of Soo-chow-foo. Further than this its origin is not known. It is no doubt a very distinct species, and probably comes from a country *further north* than any of its race in China. We may now expect to have a race of Chinese Azaleas flourishing and blooming in our open borders in England. It is likely to prove a valuable plant for bouquets, and decorative purposes, particularly so when forwarded in Spring, similar to the general class of Indian Azaleas. (Figured in *Paxton's Flower Garden*, Plate 89.)

Boronia butosma. Rue-scented. (Synonyme, B. spathulata.)—It forms a dense bush, branching freely. The flowers are borne in profusion, in terminal cymous heads, of a pretty pink, becoming a deep rose. Very neat and handsome.

Bouvardia leiantha.—This species grows more *tree-like* than the B. triphylla splendens, &c. The flowers are produced in terminal heads, of a rich deep scarlet. The *B. flava* is of similar tree-like habit, and blooms profusely. Its fine heads of *yellow blossoms*, contrast prettily with the others.

Campanula Lamii.—A hardy perennial, which blooms in profusion. The flower-stem rises two to three feet high, branching freely, and every one adorned with pretty bell-shaped white flowers. Each blossom an inch and a half long, and an inch across. Well worth a place in every flower-bed.

C. Vincæflora.—A hardy herbaceous perennial. The flower-stems rising about fifteen inches high. Each blossom has a short tube, which is yellow inside, the other part of the flower is blue. Each flower is pendant, three parts of an inch across. The plant is a free bloomer, and merits a place in every flower-garden.

Ceanothus rigidus.—The Horticultural Society introduced this pretty shrub into England. It was found by Mr. Hartweg, at Monteray, in California. The shrub is far more stiff and branching even than the common sloe-bush. It is an evergreen, with small foliage, of a glossy-green. The flowers are produced in profusion, and in what may be termed long terminal spikes, of a rich purple-blue, which render the plant very ornamental. It proves quite hardy in the Royal Gardens of Kew. It merits a place in every shrubbery. (Figured in *Bot. Mag.*, 4664.)

Chironia frutescens.—An old greenhouse shrubby plant, erect, one to two feet. It blooms very freely. Each blossom is two inches across, of a bright pink, very pretty, and blooms throughout summer.

CHOROZEMA NERVOSUM.—Messrs. Henderson, of Pine Apple Nursery, Edgware Road, obtained this pretty species from the Swan River Colony, Australia. It is an erect growing shrub, similar in appearance to C. cordatum. It blooms freely, and the flowers are produced in long terminal spikes, formed of shortish racemes of blossoms. Each blossom is of a rich coppery-orange, with crimson wings and keel. Very pretty. (Figured in *Magazine of Botany*.)

COREOPSIS AURICULATA.—A hardy perennial, two to three feet high. blooming in profusion. Each flower is three inches across, of a bright yellow, very showy, and blooming all summer.

DENDROBIUM TRANSPARENS.—A native of Nepal. The flower stalks are about a foot long, jointed, and the blossoms arise at those joints, usually two at each. A separate flower is two inches across. The ground colour white, with the sepals and petals tinged towards the tips with rose. The lip is of a creamy-white, with a large deep blood coloured blotch edged in stripes.

FUCHSIAS.—The following new varieties we have just seen at Messrs. Henderson' Wellington Nursery. They are very handsome, and great improvements in the sections they belong to.

F. HENDERSONII.—Tube and sepals of a deep crimson, the tube half an inch long, sepals spread, and the flowers two inches across. The corolla is a *full* semi-double, of a rich *violet-purple*, and each petal has a crimson stripe down the middle. It is a free bloomer, of great beauty.

F. SPLENDIDISSIMA.—Tube of medium size, that and the long *well-reflexed* sepals are crimson. The corolla is exposed to full view, an inch and a half long, of a rich violet-purple. The large flowers on long slender foot-stalks, seen at a distance, appear like very large beautiful *flies* on the wing. We are obliged to omit others till our next number.

HELIOTROPIUM VOLTAIRIANUM NANUM.—This dwarf variety grows about eight inches high, branching freely. The flowers are blue, in larger heads than the older variety. Very good bedding plant.

IMPATIENS MACROPHYLLA. The large-leaved Ceylon Balsam.—Plants have bloomed in a moist, but not very hot stove, in the Royal Gardens at Kew. It grows from two to three feet high, the leaves being six inches long, (but native specimens a foot long,) oval shaped, dark green, with a bright red leaf-stalk. Flowers small, an inch across, of a *deep-orange* stained with red. If some of our common stove Balsams were impregnated with these orange-coloured ones, improved varieties of those much admired flowers would no doubt be obtained. (Figured in *Bot. Mag.*, 4662.)

LEPTOSIPHON.—Messrs. Veitch have obtained from California a new species, the flowers are sulphur coloured, each petal orange at the middle, with a red spot at the base. It is a pretty acquisition to this lovely genus.

LILIUM WALLICHIANUM.—A year ago we remarked on this very noble Lily. We recently saw a plant in bloom at the Wellington

Nursery, and although it had occupied but a small *three-inch* pot the last Spring, the flower when fully open, is seven inches across the mouth, and eight long. In their early stage, the flowers are of a pale yellow, but when they expand a pure white, and of thick substance. They merit a place in every greenhouse. No doubt, larger bulbs will produce proportionably larger flowers; "how magnificent!" And most probably they will succeed out-doors in summer.

LOBELIA OCULATA.—This is one of the dwarf, or prostrate section, a most profuse bloomer. The flowers are of an intense deep blue, with a clear white eye. Each blossom spreads out a broad flat surface, which exposes it to full view, and renders it more showy.

LYTHRUM ROSEUM SUPERBUM.—A hardy perennial. The *numerous* flowering spikes grow from two to three feet high, and the blossoms are of a beautiful bright rose. It is remarkably showy.

NYMPHÆA DEVONIENSIS.—Dr. Lindley announced in the Gardener's Chronicle of July 10th, "At this moment there is actually flowering at Chatsworth, an hybrid produced by crossing Nymphæa rubra, with N. Lotus." Seeds were obtained in the Autumn of 1850, and in April, 1851, a most beautiful hybrid blossomed, which has been named *N. Devoniensis.* A fine figure of this noble flower is given in the August number of the Botanical Magazine, where Sir W. J. Hooker observes, "For the opportunity of figuring this truly splendid plant, we are indebted to Mrs. Spode, the lady of Joshua Spode, Esq., of Armitage Park, Rugely, Staffordshire, in whose celebrated gardens the Nymphæas, and Victoria Regia, &c., are grown in great perfection, and where the N. Devoniensis has bloomed in much splendour." It is a very free bloomer, and continues to flower from Spring to Winter. Each flower is eight inches, or more, across, of a brilliant rosy-red colour. A fine plant of it has also bloomed profusely in the tropical aquarium in the gardens of Sir W. Molesworth, Bart., Pencarrow, Cornwall. It is there planted in rough turf, laid in a heap before using, with one-sixth of dried cow's-dung added. The water kept from 75 to 85 degrees.

ODONTOGLOSSUM PESCATOREI.—A stove orchid from New Grenada. The flowers are borne in large panicles nearly a yard long. Each blossom is about three inches across, sepals and petals broadish oblong, transparent white, with a blush line up the middle of the sepals. Lip white, with a stain of yellow near the base. The column is white, with ragged crimson wings. It is a beautiful flowering species. (Figured in *Paxton's Flower Garden*, Plate 90.)

PAULOWNIA IMPERIALIS.—This noble plant has bloomed very fine this season, in the grounds of the Bishop of Exeter, at Bishopstowe, near Torquay, in Devonshire. Large panicles of its flowers were sent to Sir W. J. Hooker; the one represented in the Botanical Magazine for August, has twelve blossoms. Each flower, tube-shaped, is as large as a fine common Fox-glove blossom, of a pale violet-purple colour. They have a violet fragrance. In its native country, it forms a tree thirty to forty feet high. Its very large heart-shaped leaves have a noble appearance, and even did it not blossom in this country, render it deserving a place in any suitable situation, in the pleasure-ground.

PELARGONIUM WHITE-UNIQUE.—The flowers are tinged with rose; neither the blossoms or foliage are in form like the purple or lilac kinds, and compared with them, it is utterly worthless; for a light coloured bedding one, there are many grown much superior to it. We lately saw, at Messrs. Henderson's, Wellington Nursery, a plant of the Purple-Unique, growing upon the ridge of a piece of rock-work, blooming freely, and it had one branch which produced only flowers of a *lilac colour*. We were informed that the lilac-flowered, which was sent out last year, was obtained from a similar sportive shoot, which was cut off, and cuttings struck from it; having continued the following season to produce only lilac coloured flowers, it was then sent out as a new seedling by a florist in Surrey. Being permanent in colour hitherto, it is an acquisition.

P. DIADEMATUM BIJOU.—The flowers are of a bright rose, with a dark spot on upper petals. The flower having a white centre. It blooms freely, and is a valuable bedding variety.

P. DIADEMATUM PULCHERRIMUM.—A bright cherry-rose, upper petals a dark spot. Centre of flower white, free bloomer, fine bedding variety.

P. DIADEMATUM SPLENDIDUM.—Bright rosy crimson, edged with lilac, with the *upper* and *lower* petals almost covered with a dark velvet blotch. Each flower has a small white centre. It is a very singularly marked flower, good size, and the plant a free bloomer. A valuable bedding variety.

The above varieties of P. diadematum, have large flowers, the size of D. rubescens, or D. Sidonium, and admirable additions for bedding.

P. HENDERSONII.—This is the new *white-flowered* horse-shoe Geranium, which Messrs. E. Henderson and Son, of Wellington Nursery, purchased the stock of. The plant is of medium habit, blooms freely, and contrasts very prettily with the scarlets. The blossoms are not equal in form to the best scarlets, but the petals are what may be termed of middle breadth. It is well worth having, and a bed planted closely would be a charming contrast with others.

P. LILIPUTIAN.—This is a *dwarf variety* of the scarlets (Geraniums). It branches freely, and grows from nine inches to a foot high. It is a profuse bloomer, and the flowers a rich scarlet. One of the prettiest and most interesting, and deserves a place in every flower-garden. It is valuable too for a vase, or box for a window, &c.

Beds of the following plants were in fine bloom.

P. PUNCH.—The flowers are fine-shaped, very large, a brilliant scarlet, and is not excelled by any other.

P. PURPLE-UNIQUE.—Beautiful at all times.

P. LILAC-UNIQUE.—A charming companion to the former.

P. LUCIDUM.—The leaves are a *shining* green, the flowers a *rich red*, and in profuse bloom, very pretty, and of dwarf habit.

P. DIADEMATUM RUBESCENS.—This is a charming bedding variety, its *rosy-crimson* flowers are very showy. The *Diadematum* is a rosy-lilac, not near so pretty as the variety last described.

P. Lady Flora Hastings.—This is one of the *Fancy Class.* Its large white flowers with clouded upper petals, renders it showy. It blooms freely. If the bed does not contain sufficient plants, it has a naked appearance. Always put into a bed as many plants as will soon cover the surface, better have it crowded than thin and unsightly.

P. Frogmore Scarlet.—Very rich colour.

P. Tom Thumb.—Scarlet; excellent.

P. Pink Ivy-leaved.—This is a free bloomer, the heads rising from six to nine inches, the flowers of a rosy-pink, very pretty.

P. Cerise-Unique.—The foliage is prettily marked, and the flowers large, of a bright cherry-colour. Very pretty.

P. Commander-in-Chief.—Foliage very prettily marked with green, yellow, and brown. Flowers large, a rich scarlet. Handsome.

P. White-flowered Ivy-leaved.—This blooms freely if not in too rich a soil. It contrasts very nicely with the *pink variety.*

P. Mangles's Silver Variegated.—Free bloomer, flowers rosy-red. Along with it is the purple Verbena; these two produce a *pretty appearance,* but a few lilac-coloured Geraniums had also been planted and spoiled the effect.

P. Queen of Summer.—The leaves are pretty, the flowers large, a rich scarlet, and in profuse bloom. The early heads of flowers were out of bloom, and had a profusion of immature seeds, these spoiled the appearance of the bed. As the plants are so easily increased, the heads of seeds should have been cut away.

P. Judy.—A free bloomer, flowers good size, and of a rosy-red colour, very pretty contrast.

P. Stewart's Ivy-leaved.—The flowers of a blush-lilac, a nice variety of dwarf habit.

P. variegatum.—This is one of the white variegated, with scarlet flowers, blooms very freely, and showy.

P. Statiaskii.—This is a fancy, with dark maroon upon a lighter ground, blooms in profusion, and very showy.

The following kinds, too, were growing in mixed beds, in the Royal Gardens of Kew, and prove to be excellent for bedding.

P. Harkaway.—A compact bushy plant, grows a foot high, and blooms very freely, the flowers of a rich scarlet, excellent bedder.

P. diadematum sidonium.—Flowers large, bright rose upon a light ground, and centre white. Each petal has a deeper coloured blotch at its middle. It blooms freely, and one of the best for a bed.

P. Annette.—This is one of the fragrant, crumpled-leaved kinds, grows compact, about nine to twelve inches high, blooms freely; flowers white, with a red spot on the upper petals. Last year there was a bed of it, but being difficult to increase, only a few plants remain, we have applied to various nurseries for it, but in vain.

P. Yeatmanniana grandiflora.—Flowers large, light ground, with the upper petals having a dark blotch, edged with carmine, and a lighter margin. The lower petals have a broad crimson band across the middle. It blooms very freely, and a handsome bedder; a foot high.

P. Princess Royal (Conway's).—The leaves have a very striking horse-shoe marking. Plant dwarf, about a foot high, blooming profusely. Flowers a bright scarlet. Handsome bedder. The above are excellent for beds, we have notes of others which we shall give in future.

P. CAPTAIN DARLY.—An abundant bloomer, flowers large, of a pretty salmon-colour, leaves horse-shoe marked. Contrasts well with the scarlets.

P. SHRUBLAND PET.—Much was said by some persons of the excellence of this variety. We have seen it growing in the open ground, but on an average not above one truss of flowers to each plant, and from four to six very small narrow petalled blossoms of a dull crimson-red. We are informed that it has been in some of the nurseries around London, for six or seven years, and a few days back, we had fine plants offered us at sixpence each. When grown in a pot, it has a much less proportion of foliage, and blooms more freely, but is worthless, so far as has come under our notice.

SAPONARIA OFFICINALIS PLENO PURPUREA.—A hardy perennial, a very free bloomer, and its large double rosy-purple flowers are very showy. It will contrast well with the flesh-coloured species. Each blossom is two inches across.

STYLIDIUM AMŒNUM.—Messrs. Henderson's, of Pine Apple Nursery, obtained this very pretty species from the Swan River colony. It is an herbaceous, greenhouse perennial. The flower stem rises about six inches high, terminating in a pyramidal shaped raceme, of numerous flowers. Each blossom is about three parts of an inch across, of a pretty rose colour.

TRITOMA ROOPERII.—This beautiful species has been sent from Kaffraria, to the Rev. T. Rooper, of Brighton, in whose garden it has bloomed in the open air. It is a perennial. The flower-scape is a foot high, terminating in a longish-crown of numerous blossoms, each flower being about two inches long, of a bright flame-colour, or orange-red on the upper side, yellow beneath. It is a handsome blooming plant, and merits a place in every flower-garden. (Figured in *Magazine of Botany.*)

TECOMA JASMINOIDES.—A fine climbing plant in the greenhouse, in profuse bloom. Each blossom three inches across, pure white, with a crimson centred tube, very handsome.

VERONICA CORONATUM.—A hardy perennial, blooming in profusion. The principal flower-stems rise to two feet high, and terminate in a large number of shortish spikes, forming a *broad head* of rich blue flowers, very pretty.

IN THE ROYAL GARDENS OF KEW.

AGAPANTHUS UMBELLATUS.—One pot of this fine flowering plant, had ten heads of flowers, and each head had from eighty to ninety blossoms. Each of the flower-stems was four feet high, and bearing a vast number of fine blue flowers, they had a very pretty appearance.

A. UMBELLATUS PALLIDUS. This plant was equal in vigour to the previously described one. There was only one head of blossoms, but it contained one hundred and three flowers. The flower-stalk four feet high. The flowers of a bluish-white, and contrasted prettily with the deep blue of the others. We never before saw these plants grown to such perfection. They are potted in a strong yellow loam.

DIETES BICOLOR.—It is one of the Iris order of plants, the flowers somewhat like the Peacock Iris, sulphur and orange, with a black spot near the bottom of the petals; each blossom three inches across. A very pretty greenhouse plant.

BALSAMINA LATIFOLIA ALBA.—Flowers pure white, nearly two inches across, a pretty contrast with the B. latifolia, blooming freely in the greenhouse.

BEGONIA MARTINIANA.—The large bright-pink flowers, with their centre of golden anthers, are exceedingly beautiful. The plant grows about two to two and a half feet high, branching freely, and blooming profusely. It continues to flower from June to the end of the year, and merits a place in every greenhouse.

OXALIS ELEGANS. These free blooming plants are very beautiful. The lovely lilac-coloured flowers with a velvet centre, are deservedly admired by all persons. It does well either in the greenhouse, or turned out in the open grounds, growing from six to twelve inches high.

CAMPANULA VIDALLII.—A plant having three branches of flowers, ten blossoms on each, was very interestingly pretty. The plant was bushy a foot high, and had a number of branches, three only had pushed forth into flowering ones. The blossoms are of a pure waxy white, an inch and a half to two inches long, produced on rather long foot stalks, in a pendant manner, and have a charming effect. It does well in the greenhouse or open flower-bed, and ought to be in every one.

FUCHSIA SPLENDIDA.—The flower is but of medium size, tube and sepals of a shining bright red, reflexing much, and fully showing the bright blue corolla. A free bloomer.

F. GLOBOSA MAGNIFICA.—This is very far the finest of the *globe-shaped.* Its rich crimson tube and sepals, and the large dark corolla, render it exceedingly beautiful. It ought to be one of every collection.

F. PRINCE ARTHUR (Nicoll's).—We never saw this fine variety grown so large as here, some of the flowers being four inches long; tube pure white, corolla a bright rosy crimson. All Fuchsia growers should have one of this variety.

F. CLAPTON HERO.—The flowers are *very large,* reflexing well, and fully exposing the large dark violet-coloured corolla. The tube and sepals of a bright shining crimson. It is a noble grower, and abundant bloomer. It merits a place in every collection.

F. VOLTIGEUR.—The flower reflexes well, fully exposing the corolla. Tube bright crimson, corolla bright violet-blue. Flower of medium size, exceedingly pretty, and produced in abundance. Should be in every collection.

F. INACCESSIBLE.—Tube and sepals bright red, corolla deep violet-blue. It is what may be termed, a *long-globe,* exceedingly pretty, of good size, and produced in profusion.

F. DON GIOVANNI.—Flower very large, tube and sepals crimson, corolla purple-violet. A noble variety.

F. **General Changarnier.**—The flowers are immensely large, of a deep orange-blush, tipped with green. Corolla a deeper colour. A noble variety, and free bloomer.

F. **Pagoda.**—The tube and sepals bright red, corolla blue, changing to a dark purple. The flowers are nearly four inches long, and well reflexed, very pretty.

F. **Sedonia.**—Flower of medium size. Tube and sepals blush-white, tipped with green, corolla violet-purple. Very distinct and pretty.

The above are the best varieties we have seen. The Bride, Lady Dartmouth, Fair Rosamond, all light flowers, are also very fine.

Clematis tubulosa.—A hardy shrubby species. The flowers are *bell-shaped*, drooping, white, each blossom being an inch and a half across. It is exceedingly neat and pretty.

C. **campaniflora.**—White, of similar form to the above, but about half the size.

THE ZICHYA INOPHYLLA.

BY MR. J. R. SANTON, SIDCUP GREEN, KENT.

This beautiful greenhouse plant, which is really one of the handsomest of the Leguminous (pea-formed) plants, like all others, if not submitted to a regular mode of training, will become one confused mass of shoots, which if allowed for a short time only to become entangled, are difficult to restore to order without injury to the plant. Scarcely anything connected with gardening looks worse than to see *climbing-plants* neglected of proper training, or having the shoots tied together like a broom ; for whatever may be the natural habit of a plant, in regulating its branches we should imitate nature as nearly as possible, unless it is desirable to train them into any artificial form. My method of training this useful plant, is with four or five leading shoots ; one from the centre of the pot, to which a long neat stick is placed, the others being fastened to similar sticks at regular distances round the pot; from each of these leading shoots proceed numerous side branches, which are densely covered with a fine head of scarlet flowers. When the plant has done blooming, which is by the end of May, or beginning of June, I still allow it to remain in the greenhouse until the shoots are *well ripened*, and during this period the plant is watered *sparingly*, for it is only by moderating the supply of water that we can imitate those periodical seasons of rest which this, as well as all other exotic plants, receive in its native climate. By the first week in August it is taken from the greenhouse, and well soaked with water, then placed in the open air in a sheltered situation, but fully exposed to the sun, and having the pot inserted in another pot two sizes larger, to prevent the sun's rays from destroying the young fibrous roots, which are the principal feeding organs. The whole of the *side shoots* are pruned back to where new shoots are formed, and the *leading shoots* cut back according to their strength. As soon as the new shoots are from one to two inches long, the plant is taken from the pot and some of the soil is shaken from its roots, the stronger roots are at the same time cut back to the young fibres, it is then repotted in a new or clean-washed pot, WELL DRAINED, for there is no other plant that I am acquainted with, that suffers more from imperfect drainage than this. The soil in which it thrives admirably, is chopped turfy peat, and an equal portion of good rich turfy loam, well mixed, adding at the same time a little sharp silver-sand. In potting, take care to press the soil firmly, and frequently adding some broken bits of charcoal and bones, to keep it porous. After potting, place it in a shady situation for a short time, and by degrees, let it be fully exposed to the sun. It must be taken into the greenhouse by the end of September, or beginning of October. Zichya inophylla being treated in this manner, will amply compensate for the trouble. The leading shoots only are secured, the side ones become pendant, and the plant has a graceful and pleasing appearance. One, or more plants of it, ought to be in every greenhouse. It may be purchased at a cheap price, and is easily cultivated, blooming very freely from March to June, and is a fine Spring ornament.

WINTER AND SPRING BLOOMING OF THE LILY OF THE VALLEY.

BY A LONDON PRACTITIONER.

No doubt, many of the readers of this Magazine, have seen these lovely sweet flowers in large quantities in the flower establishments in Covent Garden Market, during the months from January to May. By the following mode of treatment, I bloom them during the period above named, and as it may be of service to persons in the country, who cannot avail themselves of the Covent Garden supplies, I forward the particulars for the Magazine.

To have flowers by the beginning of January, the latter end of November is the time to take up the roots. Those selected must not be less than two years old, and in appearance, are something similar to small heads of asparagus, when about two or three inches high, and are furnished with fibrous roots; each of these tubers are wrapped round with a little moss, and placed in pots or mignionette boxes, close together. The boxes or pots are previously filled with old bark or light earth, a thin portion is laid over the crowns, and then a layer of moss, which keeps the roots moist, assists in drawing up the flower stems. The boxes or pots are then placed on a fire-flue, or any other warm situation. Over these are turned boxes or pots of the same dimensions, upside down, to keep the plants quite dark; in three or four weeks, according to the warmth of the situation, they are abundantly furnished with their lovely bell-shaped flowers, six or eight inches high. Those coming into flower first, are taken out of this situation, being easily removed by having moss round the roots, and placed in small wicker baskets, or an ornamental vase, with Hyacinths, Van Thol tulips, &c., which are forced, something similar, for this purpose. When this sort of winter flower-basket, pyramid, or vase, is properly executed, the colours of the flowers regularly mixed, and the spaces betwixt the plants filled up with ornamental moss, it certainly has a very neat and pleasing appearance.

Where a succession is required, the roots are kept in a shady place, or in the border in the garden, covered a foot or eighteen inches with fresh stable litter, so as to be easily come at in frosty weather, as occasion may require. When finished flowering, they are planted in the garden at the latter end of March, and form a plantation for forcing purposes in two or three years.

THE PLEASURE-GROUND.

BY A LANDSCAPE GARDENER.

HAVING recently become a subscriber to your Magazine, and derived pleasure and profit from reading its Numbers, I forward you a few observations on the Pleasure-ground for insertion, hoping the readers will derive some satisfaction in perusing them.

The valuable appendage to a home of a pleasure-garden seems to own its creation to the idea that our sublime poet formed of Eden. It originated in England, and is as peculiar to the British nation as landscape planting. Whilst other arts have been derived from ancient, or borrowed from modern inventions, this has indisputably sprung from the genius of our soil, and is, perhaps, one of the most delightful, as well as most beneficial of all that claim the name of elegant.

Ornamental plantations are now so universally spread over the face of this country, that our island may be compared to a vase emerging from the ocean, into which the Sylvans of every region have set their favourite plants, and the Flora of every climate poured her choicest gifts, for the embellishment of the spot round which Neptune throws his fostering arms. My desire leads me to hope that I may add pleasure to the pleasure-ground, by pointing out the beauties of some of those plants, which must render vegetation an object of admiration and veneration to all observers. I wish to attract attention to the peculiar pleasing properties of the plants by the remarks of the ingenious, the anecdotes of the ancients, the harmony of the poets, the observations of the physicians, and the reflection of some of the moralists of all ages, and to give this subject a smiling aspect.

The vegetable ornaments of the pleasure-ground, comprises trees, shrubs, and herbaceous plants.

Though ornamental trees and flowering shrubs, seem to contribute nothing to Pottage, and little to Medicine in its present refined state, yet they add greatly to our pleasure, and considerably to our health.

They win us to good humour by their fragrance and cheerful appearance, and produce a serenity of mind by the calm reflections they present to it; thus relieving some of the maladies of the soul, as drugs mitigate the grosser and more perceptible sufferings of the body. The Poet Cowper states,

> "The spleen is seldom felt where Flora reigns,
> The low'ring eye, the petulance, the frown,
> And sudden sadness, that o'ershade, distort,
> And mar the face of beauty, when no cause
> For such immeasurable woe appears:
> These Flora banishes, and gives the fair
> Sweet smiles and bloom, less transient than her own."

The allegorical allusions which the Eastern Nations are accustomed to make by means of flowers, and the fables of the ancient poets and mythologists respecting plants, are numerous. Thus pleasing ideas may be connected with pleasing objects, and agreeable images convey lively but moral sentiments to the mind, adding to the charms of the country without recourse to romance or useless fiction. These accustom the mind to such violent sensations, that at last it is obliged to resort to an excess of feeling, either of mirth or grief, to prevent that dreaded fashionable lethargy of spirit—*ennui*. Such a habit in the end injures health, and consequently shortens life, but a calm and cheerful mind assists in the prolongation and enjoyment of both:

> "Come then ye blissful scenes, ye soft retreats,
> Where life flows pure, the heart more calmly beats."

It would seem, that the more terrible a sight, and the more violent an impression, the more agreeable to the great portion of mankind, who run with avidity after objects of horror, whilst they pass unnoticed those which produce gentle and agreeable sensations, and would to all appearance rather tremble at the awful thunderbolt, than calmly admire the beauteous horn of plenty. It has been observed that the Volcano near Naples, attracts more travellers to the city, than the DELICIOUS GARDENS, which adorns the shores of that region. The plains of Greece, overspread with ruins, would entice many to undertake a voyage to a distant country, who would feel but little inclined to travel over their native soil to view its richly cultivated lawns; and there is no doubt, but that formerly, where one person went to Egypt to be a witness of Nature's bounty to that nation, five hundred became travellers to behold its Pyramids. A temple after its fall excites more eager curiosity than it did during its construction; and many who will not cross their thresholds to look at a beautiful calm in Nature, will rush to get a sight of a storm and shipwreck in a playhouse. This love of the terrific is not, as has been asserted by foreigners, peculiar to the English nation: it is prevalent every where. I once observed an instance of it when in Paris. Wishing to visit the celebrated garden of M. Bourseau, then unequalled for the beauty of its plants by any city-garden in Europe, I received in answer to all enquiries for direction to the spot, the usual careless but short and decisive, *Je ne le connois pas, Monsieur*; but on asking the way to *La Mort*, every turn and alley were readily pointed out with all the bustle and officiousness of French politeness.

In my remarks of flowering trees and shrubs, I have nothing terrible to present to the reader; but to

"Shew Nature's form in smiling beauty drest,
And call mankind to view her and be blest."

It seems hardly possible for any mind to be so debased as to be insensible to the effects of Nature, whose *vegetable charms* become more endeared to us as our age and reflection increase. A more delightful cabinet of natural history can scarcely be formed, than the pleasure-ground affords, even when unadorned with exotic beauties. It offers matter for contemplation of the most agreeable kind, which varies still as seasons revolve; and as every tree and shrub has its peculiar inhabitants, we have at the same time a collection of animal and vegetable wonders, that are sufficient to occupy all the leisure which our economical duties allow us. As years increase, a taste for most pleasures in general diminishes. Those of the court become fatiguing; the charms of the table appear to lessen; and as passion subsides and love languishes, the gay ball and splendid opera lose their delights; but the fondness for a garden increases, and is almost the only *earthly pleasure* that does increase. Let us not, then, neglect to cultivate a taste for what will add to the delight and amusement of the latter period of life. Every tree we plant adds to the entertainment we prepare for future years, for ourselves, our friends and successors.

The introduction of a useful or an ornamental plant into our island, is justly considered as one of the most important services that a person can render his country; for it is impossible to calculate on the benefits that may be derived through his means, when the qualities of the vegetable are ascertained and its virtues known. Even what is introduced and planted merely from curiosity or ornament, seems to unite us to the nations from whence it comes. It bestows on us a share of the blessings of other climates, and affords us a portion of the smiles of a more genial sun. Whilst, therefore, remarking on the beauty of trees and shrubs, I wish to be understood as expressing gratitude to those who have enriched our land with additional charms, and more fully displayed Nature to our eyes, and not as disregarding the plants that are indigenous to our soil. I am aware that many an Englishman has sighed under the shade of the *banana*, for a sight of his *native banks*, where the primrose sparkles through the hazel-edge, and the violet peeps so modestly. The plants of our country recall the idea of it in the most forcible manner, wherever we meet them. They are often the first object that attract the attention of those who have been long absent from their native fields, and who on their return pour out the genuine effusions of joy on beholding the village-elm, the well known oak, or the unchanged yew, whose antiquity is equal to the church it shades. We are told of a young Indian Pontaveri, (from Otaheite,) who in the midst of the splendour of Paris, regretting the simple beauty of his native island, sprang forward at the unexpected sight of a *Banana tree* in the Jardin des Plantes, *embraced it*, while his eyes were bathed in tears, and exclaiming with a voice of joy, "Ah! tree of my country!" seemed, by a delightful illusion of sensibility, to imagine himself for a moment transported to the land which gave him birth.

There are with us, too, seasons when we seem as it were for an instant to go back to the delights of infancy, when, on each succeeding spring, we behold the cowslips, which afforded us so many happy hours in childhood, as we formed balls of their blossoms. Then the playful girl, bedecked with wreaths and necklaces of daisies, led her little swain in chains formed of the milky flower-stalks of the dandelion ; but who at the sight of a butterfly burst the brittle bonds and scampered away, to return, perhaps, a few years after sighing in fetters not so visible but more binding.

There is no part of nature's works more interesting than flowers. They seem intended for the embellishment of the fair, and for the ornament of the spot where they tread. Their sweet perfumes have such influence over all our sensations, that in the midst of flowering trees, shrubs, &c., the most acute grief often gives way to sweetest melancholy. When our home and domestic companions are encompassed by the pleasure-garden, our situation approaches nearest to a *terrestrial* paradise. Is it not, then, as Cowper says,

" Strange, there should be found,
Who, self-imprisoned in their proud saloons,
Renounce the odours of the open field,
For the unscented fictions of the loom ;
Who, satisfied only with penciled scenes,
Prefer, to the performance of a God,
Th' inferior wonders of an artist's hand ?
Lovely, indeed, the mimic works of art ;
But Nature's works far lovelier."

The pleasure-ground is, to a rational mind, a source of inexhaustible delight and instruction, where each season brings new joy, and every morning a fresh harvest of delightful sweets. Subjects for new thoughts and contemplations present themselves to our view, and even the most dreary months still supply cause of admiration, and discover a world full of wonders ; for,

" E'en Winter oft has seen it gay,
With fretted frost-work spangled o'er,
While pendants drooped from every spray,
And crimson bodlets told, once more
That spring would all its charms restore."

It is not to old age alone, that the garden offers its placid delights. Every stage of life, from the cradle to the grave, is attracted by its charms. The infant is ready to spring from its nurse's arms, allured by the gay colours which flowers exhibit.

They form the most innocent toy of childhood, and the cultivation of them is generally its first labour, whilst their presentation often explains the passion of youth. The happy child loves to entwine them in her locks, and the fond parents delight to see their child mimic their beauties with the pencil ;

" The flowers that grace their native beds,
Awhile put forth their blushing heads ;
But e're the close of parting day,
They wither, shrink, and die away ;

But these, which mimic skill hath made,
Nor scorched by suns, nor killed by shade,
Shall blush with less unconstant hue,
Which art at pleasure can renew."

(*To be continued.*)

A MOST SUCCESSFUL METHOD OF BLOOMING THE EPIPHYLLUMS.

BY A LONDON EXHIBITOR.

THE Cactus tribe of plants is a great favourite of mine, especially the Epiphyllums, and as the plants which I grow, bloom much more profusely, and have finer blossoms than any others I have seen, I transmit you a few brief particulars of the mode of treatment pursued.

The compost I use, consists of an equal quantity of light turfy loam, and pigeon's dung, and one-third sheep's dung, exposing the mixture one year to the influence of the summer's sun and winter's frost to mellow. When wanted for use, I add one-third of sandy peat, in both cases mixing them well together. I grow the young plants from February to July, in the forcing flower-house, kept from 55° to 60° Fahr. I afterwards remove them to a shelf in an airy situation in the greenhouse, exposed to the mid-day sun, giving them plenty of air and little water. The plants that I want to flower the following September, are placed in the forcing-house the first week in December, giving them very little water for the first ten days, and gradually increasing the water as the plants advance in growth. About the 1st of February I stop all the young shoots, which soon become well ripened; from this time I decrease the quantity of water until they become quite dry, in order to throw the plants into a state of rest. In the beginning of March, I replace them in a cold shady situation in the greenhouse, treating them as before. For plants to flower in August, I place a quantity more in the forcing-house the first week in January, treating them the same as those for September; only they are put to rest in the greenhouse a fortnight later, and replaced in the forcing-house one week sooner.—The first flowering plants are put in the forcing-house the end of January, and will come in flower about the middle of March. When these plants have done flowering, and are removed from the drawing-room, or greenhouse, I prune out most of the old shoots that have flowered, so that the plants are furnished regularly with young shoots for flowering the ensuing year; these plants are also placed in the forcing-house for ten days, to ripen the young wood and dry up the moisture, and are then put to rest in the greenhouse as usual: such plants will flower a second time in October. Others put in the forcing-house the middle of February will flower about the end of April; if then pruned, and dried, and put to rest as before, they will flower a second time in November, and so on in proportion. I repot them at all seasons whenever the plants may require it, always observing to keep the pots well drained with potsherds, that the moisture may pass off readily. This process may be considered troublesome, but superior growth, and abundance of flowers, amply repay the care bestowed. By the above treatment, *E. speciosus* and *Jenkinsoni* have generally produced from one hundred to a hundred and fifty fine expanded flowers, at one year old, plants about two years old of *E. speciosus* bore two hundred flowers, *E. speciosissimus* ninety-two, and *E. Jenkinsoni* one hundred and ninety-four. I prefer growing them in wooden tubs, with nice stakes fixed to the tub, to the usual mode of supporting them by sticks driven into the ball of the plant, which I consider injures the fibre, and makes the plant appear unsightly.

MISCELLANEOUS SECTION.

ROOTS AS A MEANS OF PROPAGATION.—As it is a fact, which botanists have clearly demonstrated, that all the organs of plants have an extremely simple origin, and are formed, as it may be said, by a single utricle, which engenders others, among which vessels of different kinds appear; that this mass of utricles proceeds in this manner to constitute, under the vital influence, plants of various forms, adapted for our use, and for increasing our enjoyment; since it is the case, I repeat, that all plants originate by a simple and uniform organisation, and that many of them are naturally multiplied by division (segmentation) we may thence conclude that every detached part of a plant, placed under conditions favourable for its preservation, would reproduce an individual similar to that from which it was taken. Practical experience daily furnishes us with numerous examples in support of this view of the subject.

What does, in fact, the gardener when he cuts off a branch from some plant in order to make it produce roots? Is not the complete separation of the small portion of the plant made with the intention of its becoming an individual similar to that from which it was taken? Do not cuttings and buds afford daily confirmation of these data of vegetable physiology? Is it not the case, that in some plants, Gloxinias and Achimenes, for example, a leaf, or the fragment of a leaf is sufficient to propagate the species? Moreover, is it not known that in some of the Lily tribe even a single scale detached from the bulb will produce minute bulbs or shoots from its base; and, finally, one of the scales in some cases may be cut into small pieces, by means of which, the gardener can produce several plants.

These examples, which might be easily multiplied, are, I presume, sufficient for the subject I have proposed; and they lead to the conclusion, that, if the above-ground portions of a plant can produce new individuals, so ought likewise the under-ground parts or roots, seeing that they have the same elementary formation. I am convinced that this part of the plant has hitherto been too much neglected as regards propagation, and that in this respect it will become of great importance, when it shall be advantageously employed in the propagation of plants that are found difficult to increase by other modes. It may be employed for producing plants either directly similar to the original, or for furnishing stocks. In the first case, it is sufficient to cut the roots into small pieces and plant them in the natural soil, as is usually done with the Catalpa, Tecoma, Paulovnia, Xanthoxylum, Cydonia, Azalea, Maclura, Gingko, Calycanthus, Syringa, Prunus, Morus, Guilandina, Volkameria, Ailanthus, Rhus, &c.; and in the second, that is, when we wish to raise stock, we must proceed as is done for the Pæonia, Clematis, Bignonia, &c.

The examples which I have cited may be extended to herbaceous plants, such as the Lobelia and certain Anemones. The Pæonia officinalis, &c., make equally good plants from pieces of the roots, and in my opinion this is the best mode of propagation for these plants. Indeed, certain families, such as the Campanulaceæ, Boraginaceæ, Convolvulaceæ, and the Ranunculaceæ, &c., seem to possess this property in a high degree.

In endeavouring to direct the attention of gardeners to the roots as a means of propagating plants, I have the conviction that the certainty of the proceeding will be very advantageous in the propagation of certain plants which refuse to strike from cuttings taken from shoots or branches. If we have great difficulty in so propagating them, it is frequently because the mode employed is not suitable to the degenerated or domesticated state into which we have brought them; for we cannot imagine that the Creator, in spreading over the earth innumerable species of plants, intended that they should disappear; but on the contrary we may rest assured that He has given each of them the means of reproduction. These means are the seeds; but as man, always desirous of enjoyment, endeavours to procure new, by transporting into the country which he inherits, plants from a different region, and which are by this frequently rendered sterile, he must submit to the consequences of this transgression of natural laws. The various cares which plants require, and the difficulty which we experience in their propagation, have caused us to have recourse to a part of the plant less subject than the stems and flowers to the influence of climate.

I therefore consider the roots as being peculiarly adapted in most cases, if not in all, for the propagation of plants which will neither produce seeds nor propagate by cuttings of the shoots.—*Carrière, in Revue Horticole, June*, 1852.

Culture of Exotic Cypripedium.—They require to be grown in an orchid house, where they are of easy culture, producing their interesting flowers in the spring months. They should be grown in a temperature ranging, by day, from seventy-five to eighty-five degrees, and at night from sixty to seventy degrees. In the winter season, from sixty to seventy degrees by day is sufficient. While the plants are growing, the atmosphere must be maintained in a moist state; the plants also require a tolerable supply of water, which should be given with a syringe or a small pot round about the plant, but care must be taken not to water over the foliage, for this would be very likely to cause the plant to rot. In the winter and resting season water must be applied very sparingly, and the atmosphere must be kept much drier. The plant requires plenty of pot-room, and the pots must be well drained. The compost should be rich in vegetable matter; such as a mixture of one-half decomposed sphagnum, and one-half of rich fibrous peat-soil. The plant comes into flower in spring, and remains from two to three months in bloom, if kept in a warm dry house.—(*Magazine of Botany.*)

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

ANNUAL flower seeds, as Clarkia, Collinsia, Schizanthus, Ten-week Stock, &c., now sown in small pots, well drained, and kept in a cool frame, or a spare corner in a cool greenhouse, through winter, will be suitable for turning out in the open borders at the end of March or in April. Such plants bloom early and fine; they are early ornaments for the flower-garden; and as they decline, the spring-sown plants are coming into bloom. Seeds of many kinds, *now sown* in the *open border*, generally survive the winter, and bloom vigorously early the next season. *Carnations:* the layers should be taken off, severing them *at a joint* as near the root as possible. Only a few of the bottom leaves should be trimmed off to admit the compost to settle closely round the stem, and that no leaves may rot inside the soil, and be likely to damage the main stem. The compost in which to pot them must not be rich, or the plants will be likely to grow too vigorous, and become what florists term too gross. Equal portions of year-old turfy loam and leaf-mould, with a small proportion of sand mixed therein, is rich enough, and of a dryish texture, and the plants keep healthy in it if otherwise duly attended to. They must have a liberal drainage: over the broken pot, &c., spread a portion of moss or turfy loam, in order to prevent the compost settling amongst the bits of pots, and to allow a free passage for the water draining away. The compost must not be sifted, but chopped, and in its rough state. In potting, place two layers in each pot. When potted, put them in a cool frame for about ten days, keeping the lights closed, and shaded from mid-day sun; this contributes to an immediate striking root afresh: afterwards they may be fully exposed in a sheltered spot, having a thick floor of coal ashes or boards to place the pots upon, in order to prevent worms entering. *Pinks:* beds of them may still be made, and the earlier the more successful: dig into the bed four inches in thickness of old manure; do it a week or so before planting, and plant as early in the month as you can. *Pansies:* beds of them should be made for next spring bloom. Pot some of all the best kinds in small pots, to be placed in a cool frame during winter. If the sowing of the seeds of biennials, as Scabious, Canterbury Bell, Brompton and Queen Stocks, &c., has been neglected, they should be attended to as early as possible. *Verbenas:* runners should be potted in small pots, a third filled with potsherds, and the rest with good loamy soil, placing them in a close cool frame for ten days, shading from mid-day sun: after which gradually expose them to open air. Attention to them should be *immediate*. *Bulbs*, as Hyacinths, &c., are now to be had, and the sooner they are potted the more vigorous they will bloom. *Chinese*

Primroses should be encouraged for winter blooming. If mildew appears on any plants, dust them with sulphur immediately. *Camellias* may be grafted; the operation may be performed with the greatest success by pursuing the method the French call "*graffe en placage*," which is merely inserting that portion of wood that includes a bud and leaf cut longitudinally into a corresponding cleft in the stock. The grafted subjects should be plunged in bottom heat, and kept covered for at least a month. *Roses* may still be budded. Nail to the wall young shoots of Banksian Roses. Cut clean away those not wanted. Prepare beds of *Sweet Violets*. Roses for forcing too. Collect seeds as they ripen.

IN THE GREENHOUSE, &c.

Cuttings of nearly all plants may be successfully struck yet; but the earlier they are put in the better. Towards the end of the month take in the tenderer greenhouse plants; but the house should be whitewashed, &c., previously if required. Repot *Chrysanthemums*, if the pots they are in be full of roots; give manure-water once a-week. See on culture the articles in early numbers of this year. *Cinerarias*: pot off singly the offsets, also seedlings. Seed may still be sown, but as early as possible, in order to have the plants strong enough to pot off before winter. Cuttings of bedding plants should be put in directly. Pot off singly rooted cuttings of *Pelargoniums*, &c. Cuttings of *Tea Roses*, *China*, *Bourbon*, &c., soon strike root at this period.

BRIEF REMARKS.

LYCOPODIUMS. (Mosses for Stoves, Greenhouses, or Sitting Rooms.)—A day or two ago we saw, in a lady's parlour, a very ingenious and pretty use to which the *Lycopodium apodum* was applied. Long, oval-shaped, ornamental pots, or, perhaps, they might be dignified with the names of vases, about six inches deep, as much across, and fifteen inches long, were well-filled with soil, and some wide-necked glass bottles plunged nearly up to the rim in it. Then the surface was planted with the Lycopod, and completely covered with it. The vases had saucers of the same form; in these they were placed; this prevented the water, when applied to the soil, from dropping upon the carpet or floor of the room. The glass bottles were to contain cut flowers; and in the instance we saw they did so, and certainly had a novel and very pleasing effect, having much the appearance of miniature flower-beds upon a tiny, beautiful, green lawn. The vases were made of the material called terra cotta, and would last for years, if not broken by accident. This idea, we think, might be carried out to a great extent. Why not have the vases made larger, and the spaces where the bottles are filled up with plants in pots grown in a frame or greenhouse for the purpose, brought in when in flower, and renewed when the bloom is over? Plunged in this way, and the surface covered with the pretty green Lycopod, very little water would be necessary, and the roots of the plants would be then protected from the drying influence of the air in the room. The flowers would last much longer in perfection, and every bud would bloom. The vases might be made of any material combining elegance of form and durability, such, for instance, as glass, or cast iron, painted of various colours.

Lycopodiums may be used, also, to cover the borders of a conservatory or greenhouse. This has been done in many places at different gentlemen's seats, and in such a situation they are always admired, the green being so fresh and beautiful. We grow some of the drooping species in ornamental or rustic baskets with the happiest effect. In particular, we have some made of glass of a circular form; these are large enough to contain a sufficient body of soil to supply them with nutriment. The kind used is the very ornamental *Lycopodium stoloniferum.* One specimen of this species measured a foot across, as much high, and drooped considerably over the edge of the glass vase, and was deservedly much admired.—*T. Appleby, Cottage Garden.*

The Double Blue Hepatica with White Flowers.—The following may be added to the many "sports" mentioned from time to time in your columns, for it is not met with every day. A plant of the double blue Hepatica produced very dark blue flowers in the spring of the present year; a second crop of blossoms is now on the plant. I have enclosed one of them for your inspection, and, with the exception of the outer petals, which are slightly tinged with blue, the rest of the flower may pass for a good double white Hepatica, a flower that is often sought after but seldom found. Could anything be done to prevent the flowers becoming blue in the spring of next year?—*Peter Mackenzie.*

Cotoneaster microphylla.—In this Magazine for 1849 I noticed a recommendation of this trailing shrub for covering a wall, or other unsightly structure. That autumn I procured a quantity of plants, four feet, or upwards, high, and having an old wall seven feet high, I planted them against it. Last winter they were loaded with the *bright red* berries, and they continue still to be ornamental. The shoots have pushed two feet more this season, have borne abundant bloom, and fresh fruit is succeeding. Nothing can be better for the purpose; the plant is evergreen, too, and forms a close compact cover. It is especially beautiful with its rich coloured berries in such profusion. It does admirably, too, for a low edging to a bed in the flower garden; and when trained, a single plant to a pole, or formed to a standard tree, by dressing away the side shoots, and finally forming a head, its pendant branches laden with rich coloured fruit has a pretty effect in a shrubbery, or on a lawn.—*Belle Vue, Brixton.*

Chrysanthemums in Pots.—These are usually placed upon a bed of ashes, sand, or soil, into which the roots generally push, and tend to make the plants grow vigorously. The first week in September take up the pots, and cut the roots away which had pushed into the bed. This checks the growing of the shoots, tends to *consolidate* them, and induces them immediately to form blossom buds. This attention is particularly necessary with the *vigorous* grown *Minima section.* If the Chrysanthemums are growing out of pots in the open ground, then with a spade sever the roots at about four inches from the main stem, on one side now, and on the other in the course of a week or ten days. Finally pot the plants early in October, if desired for indoors.

Chinese Azaleas.—In the following compost they flourish admirably. A rich brownish, turfy peat, which has been heaped for half a-year, chopped and turned over a few times, to which add about one-sixth of silver sand, and a liberal sprinkling of bits of charcoal, and porous stones. Always have a free drainage, and the peat must not be sifted, but in a broken open condition. In the *growing* season give liquid manure once a-week, it promotes their vigour, and a fine *green* foliage. They require to be forced into quick growth immediately after blooming, and whilst here to be frequently syringed over head with soft water, doing it a little while before the sun declines from the pit or house. When the shoots have extended the desired growth, give water more sparingly, and admit air more liberally, in order to get the wood of the new shoots firm, and to promote the setting of the flowering buds. Allow the plants to have a due portion of sun in summer, and never place them in a shady situation, or the foliage will turn brown. During winter keep the plants *just from frost,* whether in a pit or greenhouse. As soon as the plants cease blooming repot them, never do it in spring, for if repotted then, it will cause new wood to push, and the shoots will rob the previously formed flowering buds, and prevent the blossoms appearing.—*A Practitioner.*

On Raising Seedling Carnations.—On turning over the pages of one of the numbers of the present year's *Midland Florist,* I cast my eye on an article written by Mr. Dodwell, on the Carnation, in which he advises seed to be sown *on a gentle heat,* and to be sparing of water. What need there can be for bottom heat to facilitate the growth of seed that will vegetate in nine or ten days, I am at a loss to conceive. Twenty-five years ago, when I first sowed seed, I was advised to sow *nearly half an inch deep,* without heat, and plants so raised, for the most part bloomed next year. I continued for some years to sow in the same way, with perfect success, as far as raising plants was the question; and the list of dealers, seventeen or eighteen years ago, will show some flowers of mine considered good. A lapse of many years occurred before I again began seedling raising. In the spring of 1850, having saved a considerable quantity of seed in 1849, and supposing that the custom of *using heat and shallow sowing* must in that interim have been discovered to be an improvement, I adopted it, and found that hundreds damped off, or "shanked." In 1850, I saved but a single pod of seed, and returning to my old system of deep sowing and a northern aspect, I shall this year bloom every plant so raised, every seed having, I believe, produced a plant. Last year, I again sowed a rather large portion of seed, which has produced a two-light box full of plants; and these were sown in pots and pans, fully exposed to the atmosphere, and carefully kept out of the influence of the sun heat, in a northern aspect, where, at least, they received no more than the early and late rays of that luminary, keeping the surface soil constantly moistened, the pots, &c., being carefully and efficiently drained, so that no superfluous moisture might remain long in the soil. Plants so raised will be found to drop their cotylidons almost on the surface of the soil, and give not the least trouble to the raiser.—*J. W. Newhall: Midland Florist.*

ON THE EPACRIS.—All the species of Epacris are natives of New South Wales, and they, as well as the vast number of hybrids, are very handsome shrubby greenhouse plants. Their culture is very simple and easy. Those of delicate slender habit require to be grown in equal parts of light sandy loam and peat, but all the vigorous growers thrive best in sandy peat alone. They nearly all come in flower from February or March, and continue blooming until June or July, a few bloom most of the winter, as well as spring and summer. In June they must be turned out of doors with the other greenhouse plants, but *previous* to which, it will be necessary *to pot them*, in most cases shifting them into larger pots; this is indispensable, as their roots are so fine a texture, that if the pots be placed out of doors, and consequently exposed to the alternations of heat and cold more than when in the house, *the roots against the sides of the pots* will receive material injury, the plants will *become brown*, and in most cases die; this I have seen in very many instances. Good drainage in every case must be attended to, for any deficiency here will seriously injure if not totally destroy the plants. Never sift the soil in which the plants are potted, but chop and break it well, although in some cases this is scarcely necessary, when the turfy parts are well rotted. Never allow the soil to become *hard and dry*, particularly amongst those species potted in sandy peat alone; because, from the delicacy of the fibres of the roots, this cannot be the case without the plants being materially damaged, if not destroyed. In potting, never cut off the matted roots with a knife, but merely pull them with the fingers without damaging the ball more than is necessary. Always let the plants stand in an *airy part* of the greenhouse, and never crowd them among other plants, or they will not prosper.

GARDENIA RADICANS. (Cape Jasmine.)—When the plant has ceased blooming, then repot it, and promote its vigorous growth, giving liquid manure once a-week. It grows best plunged in a gentle warmth in a hot-bed. When the new shoots are the desired length, then let the plants be exposed to the open air, say from the middle of August to the beginning of October, by this attention the new wood becomes firm and properly ripened. Let the plants be taken in when the other exotics are, be kept *barely moist* in winter, and as early as January you may begin to force them into bloom, taking in other plants successively every three weeks. They bloom best plunged in a dung bed or bark bed frame, when the flowers are nearly expanding remove the plants if desired into a greenhouse, setting room, &c. It flourishes in equal parts of rich loam, peat, and well-rotted leaf mould, with a liberal drainage.—*A London Florist.*

LESCHENAULTIA FORMOSA.—This beautiful little plant, in its appearance, is very similar to the Erica, and like those plants require to be grown in bog or peat earth. It is also remarkable for the great length of time it continues flowering, commencing early in February, and can scarcely be said to have finished its bloom the November following. In its growth it never attains a very great size, and is particularly adapted for small fancy vases, as it does not require a large pot, indeed it flourishes much better when grown in small sized pots, and has a bright blood-coloured flower, but when confined in a room it is almost sure to change to a bright orange, but by being exposed to the air it very soon regains its former colour; it is not so difficult to keep as the Erica, but like them should never be allowed to get quite dry, but always be kept moist, at the same time not to be saturated with water. It is very hardy, and will bear to be exposed to the air during the day time when the weather is not frosty, and from the end of May can be kept out of doors altogether.—*An Exhibitor.*

TRANSMISSION OF FOREIGN SEEDS.—Mr. M‘ Nab recently communicated to the Botanical Society of Edinburgh, that he brought over from America seeds of many of the rarer Oaks, &c. in boxes filled with soil, taken from a depth of ten inches below the surface, so that they possessed only the *natural* dampness. A layer of soil two inches deep was placed at the bottom of the box upon which a layer of seeds was distributed; another layer of soil, and then seed, and so on till the box was full. Each box was 14 inches diameter, made of three quarters inch deal wood. The soil and seeds were pressed down very closely. Arriving at Edinburgh in December, he had the seeds and soil sown over the surface of shallow pans and boxes. During the following spring they grew admirably, whilst of a quantity brought over at the same journey, wrapt up in paper bags, &c., very few succeeded. More recently (last October) Mr. M‘Nab has had a quantity of seeds sent from the West Indies, packed in soil, and were immediately sown, they have vegetated most successfully, and grown admirably this season.

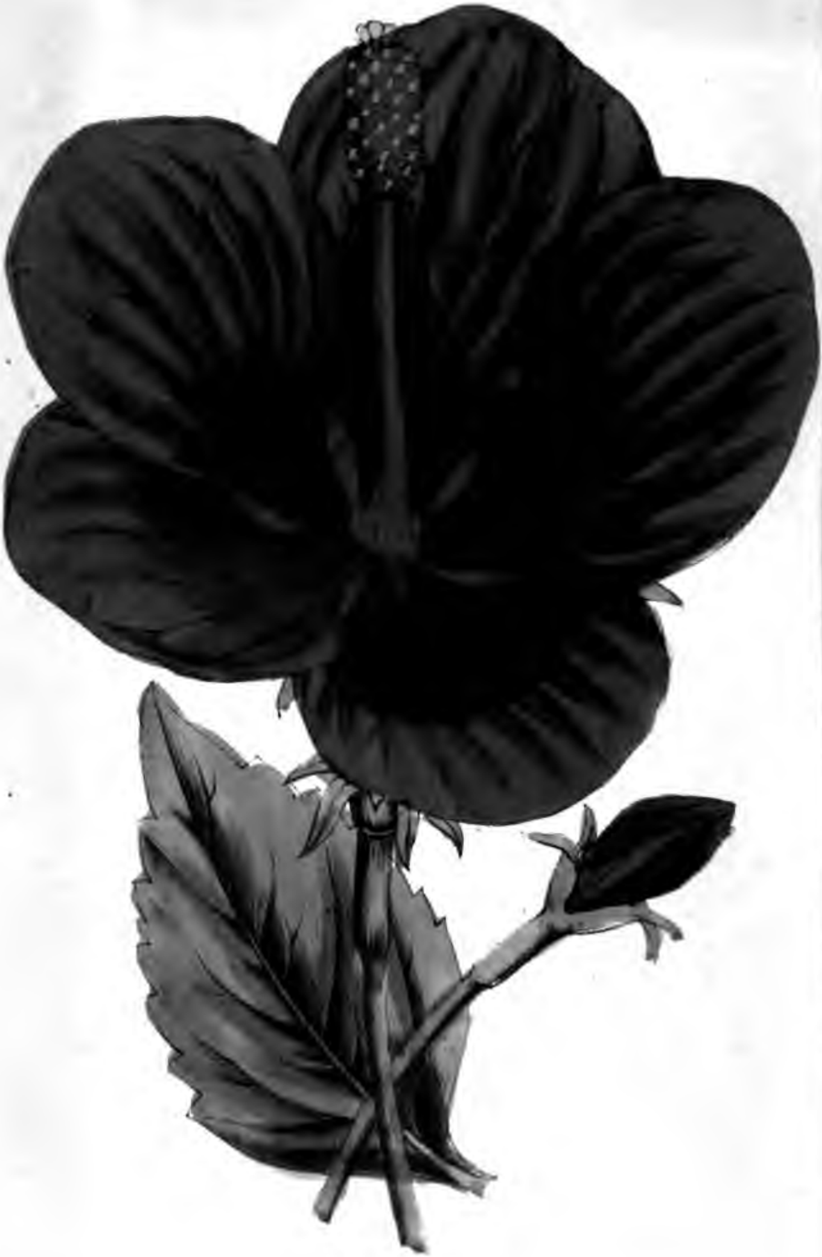
ORNAMENTAL CREEPERS.—I should be very much obliged, if some reader of the *Cabinet* would give a list of Ornamental Creepers, or climbing plants, suited to train against a wall, trellis, pillar, or arbour. A list of greenhouse, and one of hardy kinds, will confer a great kindness on *Flora.*

CHARCOAL.—This is an impure form of Carbon, and is manufactured on a large scale for the purposes of the arts. The process of manufacture consists in exposing to heat billets of wood, or other organic matter, under such conditions as either wholly or partially to exclude air. Charcoal has several properties which render it of value to the cultivator. As a manure, it does not act by furnishing carbon to the vegetation; because it is, in reality, one of the most indestructible substances known, and remains for an indefinite length of time without change. But it is remarkably absorptive of certain gases, which it retains within its pores in a state of high condensation. A fragment of freshly burned charcoal condenses as much as ninety times its bulk of ammoniacal gas, and thirty-five times its volume of carbonic acid. As these two gases form the principal organic food of plants, it is obvious that charcoal may have a powerful individual action upon the growth. The experiments of Saussure and others, have shown that plants flourish with great luxuriance when the atmosphere in which they grow contains more than the usual amount of carbonic acid. Charcoal, after having absorbed carbonic acid and ammonia from the air, places plants under favourable conditions for receiving and appropriating a larger than usual amount of this organic food. The only difference is, that instead of entering the plant by the leaves, they reach it through the roots, which absorb the rain water containing these gases, washed out from the charcoal. Thus, charcoal, from its absorptive nature, becomes an indirect means of increasing the supply of carbon and nitrogen to plants. Different kinds of charcoal have varying values in this respect. Experiments made by exposing freshly burned pieces of charcoal in the air, showed their different absorptive powers, by the increase in weight after they had been exposed a week to the atmosphere. The charcoal from fir gained 13 per cent. in weight; that from lignum vitæ, 9·6; that from box, 14; from beech, 16·3; from oak, 16·5; and from mahogany, 18. Charcoal also possesses the property of absorbing and retaining the odoriferous and colouring principles of most organic substances. It is, on this account, used for removing the putrefactive taint from foul water, or other putrid substances. When used as a filter for foul water, both the smell and colour are removed.—*Prof. Playfair, in Morton's Cyclopedia of Agriculture.*

REMARKS ON THE OLD DOUBLE YELLOW ROSE.—The Rose has very much engaged my attention for several years, in order to ascertain by what means the evil of the buds being injured, and dropping off might be avoided, and I am now enabled to state that if the following treatment be pursued a splendid bloom may certainly, and invariably, be obtained. The plant requires to have a good loamy soil, upon a dry substratum, moderately enriched. It must be planted against a good aspected wall, either full south or as near as circumstances admit of the latter. The plant must be trained as is done *to a peach tree,* " and early in summer, when the shoots are young, a suitable portion must be secured to the wall, as is done to the peach, and all others be taken clean away." As soon as it is perceived the shoots have embryo buds upon them, a cover of canvas, or something that will cause shade, must be fixed so as to cover the entire plant. This shading is essential to success. If the covering is placed so as to keep the rains from the border, recourse must be had to watering, also an occasioned sprinkling by means of syringe must be given over the foliage.

When the blooming is over, the shading is no longer requisite, and its removal is necessary to promote the ripening of the shoots for the next year's supply, which is an essential point to be obtained. My first success with blooming the rose successively was by the following circumstance. A plant was growing at the south side of a vase placed on a pedestal, around which the branches were trained. At the blooming season I found all the buds on the south (sunny side) went off in the usual way, but all that portion of the plant which was on the shady side produced perfect bloom in perfection. It appears to me to be essential to obtain well ripened wood, and then to give shade during the period from buds being formed to blooming. These being obtained success is certain. I have a plant which now annually produces a profusion of fine flowers treated in the manner above specified. During the first summer that I trained the plant against the wall, a considerable quantity of young shoots was produced. In order to assist the shoots that had buds upon them, I cut off all others, which amounted to three parts of them, so sudden a destitution caused all the buds to drop off, but when the shoots are stripped off at an early stage this evil is entirely obviated.

TOWN'S EXHIBITION OF CARNATIONS AND PICOTEES HELD AT DERBY, *August* 4. 1852.—The requirements were " A Town's Collection of 12 dissimilar varieties of Carnations, and the like number of Picotees, to be shown in boxes of the Horticultural Society's (of London) dimensions." A spirited competition took place, and York, Leeds, Wakefield, Middleton, Birmingham, Leicester, Edinburgh, Nottingham, Northampton, and Stamford, each contributed something to the general gathering. Through untoward circumstances Middlesex was unrepresented. CARNATIONS: 1st, *Derby*, with Seedling, S.B., Flora's Garland, Premier, Firebrand, Lorenzo, Lord Milton, Admiral Curzon, Magnificent, Cradley Pet, Squire Meynell, and Princess (Seedling); 2nd, *Birmingham*, with Premier, Lord Rancliffe, Briseis, Admiral Curzon, Ariel, Miss Thornton, Pollington, Lydia, Black Diamond, Lord Lewisham, Lady Rhodes, and Lovely Ann; 3rd, *Nottingham*, with Taylor's Lucia, Hale's Albert (Seedling), Lady Peel, Earl of Leicester, Falconbridge, Admiral Curzon, Lord Byron, Lord Milton, Lady Gardiner, Firebrand, and Oberon; 4th, *Leeds*, with Lord Milton, Magnificent, Great Northern, Rainbow, Firebrand, Ariel, William the Fourth, Lady Ely, Rose Helen, Admiral Curzon, Paul Pry, and Justice Shallow; 5th, *York*, with Miss Thornton, Lord Rancliffe, William the Fourth, Admiral Curzon, Ariel, Knostrop Pet, Lydia, Briton Splendid, Rainbow, Squire Meynell, and Brilliant; 6th, *Wakefield*, with Seedling No. 2, Beauty of Brighouse, Admiral Curzon, Lady of the Manor, Hepworth's Leader, Lord Rancliffe, Nulli Secundus, Seedling, Lord Milton, Seedling, Squire Meynell, Patriot; 7th, *Leicester*, with True Briton, Duke of Rutland, Prudence, Earl of Leicester, Gladiator, Briseis, Black Diamond, Squire Meynell, Lorenzo, Hamlet, Queen of Purples, and Princess Royal. A fine stand from Edinburgh was disqualified, containing a self-petal. TWELVE DISSIMILAR PICOTEES: 1st, *Derby*, with Mrs. Norman, Duke of Rutland, Ganymede, Green's Queen, Mrs. Barnard, Venus, Alfred, Ophelia, Bayley's Seedling, Mary, Prince of Wales, and Isabella; 2nd, *Birmingham*, with Audrey, Prince of Wales, Alfred, Green's Queen, Elizabeth, Mrs. Brown, Duchess, Delicata, Venus, Amethyst, Mrs. Barnard, and King James. 3rd, *York*, with Alfred, Green's Queen, Lady Franklin, Miss Rosa, Red Rover, Mrs. Wood, Elizabeth, Portia, Delicata, Mary Ann, Mrs. Barnard, and King James; 4th, *Nottingham*, with Princess Royal, Elizabeth, Juliet, Green's Queen, Gem, Lord Nelson, Prince of Wales, Duke of Rutland, Enchantress, Isabella, Alfred, and Mrs. Barnard; 5th, *Leeds*, with Mrs. Barnard, Elizabeth, Lady of the Lake, Prince of Wales, Regina, Ann Schofield, Alfred, Christabelle, Cerise Blanche, Mrs. Norman, Duke of Rutland, and King James; 6th, *Leicester*, with Prince of Wales, Duke of Rutland, Nina, King James, Venus, Christabelle, Lord Nelson, Youell's Gem, Bates, Seedling, Mrs. Norman, Prince Albert, and Jenny Lind.



Hibiscus, New. Var.

FLORICULTURAL CABINET

OCTOBER, 1852.

ILLUSTRATIONS.

HIBISCUS ROSA-SINENSIS—VARIETY.

THE Stork is very fond of the leaves and tender branches of this tribe of plants, and from this circumstance the name *Hibiscus* (derived from *Ibis, a Stork*) has been applied.

The *Hibiscus Rosa-sinensis* (*Rose of China*, or *Chinese Rose*) is held in high estimation in that country, as well as in other parts of India, where it grows naturally. It is called by the Indians "The Gem of the Sun." In its native situation, it grows to a moderately-sized tree, and its large *rosy-red* blossoms, produced in profusion, render it very ornamental. In China and Cochin-China it is said to be very commonly used for garden hedges, as well as singly in the gardens for ornament. Latrobe speaks of it as making a conspicuous figure in the hedges of the Cape of Good Hope, and there growing to the height of twenty feet. The Indians make these beautiful flowers into festoons and garlands on all occasions of festivity, and even in their sepulchral rites. They are also put to a humble and very different use, that of blacking shoes, whence it has been named the *Shoe-flower*. The flowers yield a very black pigment: on this account it is said to be used for blacking the scabbards of the hangers in Batavia. The females blacken their hair and eyebrows with these Roses, which bloom nearly all the year round.

We are informed by plant collectors that the Hibiscus, in its native localities, flourishes the best in a deep loam, upon a dry substrata. In our stoves, &c., they succeed best in equal portions of *rich loam* and peat.

The Hibiscus Rosa-sinensis was introduced into England just one hundred years ago, and has been an inhabitant of our hothouses in general throughout the nation. The flowers of the original species are *single*, of a dull red colour. We have long possessed, too, several *varieties* both single and double-flowered. There are the double red, double crimson, double buff, double yellow, double flesh, and double variegated; all of them are highly ornamental: so are the single blossomed. Of these latter, the H. Parkerii has flowers of a *rich red*, with a deeper coloured centre, very handsome. The variety which we now figure is much superior to it or any other we have seen; its *intensely rich brilliant scarlet flowers, with a dark centre*, are most splendid, and render it deserving a place in *every stove or warm greenhouse*. It is a seedling raised by a gentleman in the Isle of Wight, and blossoms of it have been sent us by Mr. Samuel Whitmore, nurseryman, near Ryde, in that island, who possessed the stock.

NOTES ON NEW OR RARE PLANTS.

Abelia triflora.—Major Madden sent seeds of this pretty *half-hardy shrub* to the Glasnevin Botanic Garden, Dublin. Mr. Moore, the curator, states that "four years ago seeds were sown, and of the plants raised the first has bloomed this season (1852). I consider it an acquisition in the way of a *hardy shrub*. Our plant is about three feet high, and covered over with pretty pink blossoms." The plant had been put in the open border four years ago, where it flourished without protection. It forms a neat branching shrub, blooming profusely. The flowers are borne at the ends of the numerous shoots, three blossoms together, and each terminal head has two or three of these clusters. The blossom has a tube three parts of an inch long, pale yellow at first, becoming tinged with red; but when the flat, five-parted limb (end of blossom) opens, the surface is white, tinged with rose, and is half an inch across. It is a charming neat shrub, either for the greenhouse or open air, in a sheltered situation. Dr. Wallich states that it is found wild on the highest mountains towards the Himalaya. He also states the blossoms are highly fragrant. (Figured in *Paxton's Flower Garden*, plate 91.)

Brya ebenus. The Jamaica Ebony.—This West Indian shrub is common in Jamaica, where it attains the height of five or six yards; but when grown in a stove it maintains a branching shrubby character. It is an evergreen, with box-like leaves, and blooms in profusion. The flowers are *pea-shaped*, each blossom three parts of an inch across, of a bright orange-yellow colour, each twiggy shoot having a long spike of flowers; and Dr. Fayden says, "that on the Jamaica hills it reminds the traveller of the Broom of Europe." The flowers are fragrant. This shrub is very different from the true Ebony of commerce, viz., Diaspyros ebenus. It merits a place in any stove collection, being highly ornamental. (Figured in *Bot. Mag.*, 4670.)

Cactus crenatus grandiflorus.—The flowers are large, of a creamy-white; the sepals are yellow and brown outside. A beautiful variety, which is in the possession of Mr. Green, gardener to Sir E. Antrobus, of Cheam.

Calanthe vestita (Orchideæ).—This Indian orchid has been introduced by Messrs. Rollison, of Tooting, where it has bloomed;

also with Messrs. Veitch. The scape of flowers is about a foot long. Each blossom is nearly three inches across, white, and its large spreading lip has a striated spot of orange-yellow at its disc. (Figured in *Bot. Mag.*, 4671.)

Calanthe viridi-fusca.—It has bloomed in the orchid house in the Royal Gardens of Kew. The scape of flowers half a yard long; each blossom an inch across; petals and sepals narrow, of a greenish-brown; lip yellowish-green, spotted or dotted in lines of purple; column yellow, tinged with rose. (Figured in *Bot. Mag.*, 4669.)

Curcuma Roscoeana (Scitamineæ).—A native of Pegu, in the East Indies. It has recently bloomed in the stove at Sion House gardens. The plant has large oblong leaves, about half a yard across; the spike of flowers is nearly a foot long; each blossom, cell-formed, is about an inch across its mouth; the bracts (sides of the hollows) are of a deep orange-red, tinged with green; and each hollow contains two or three bright yellow flowers. The large cells are arranged around the spike, in the way of a honeycomb. It is very ornamental. (Figured in *Bot. Mag.*, 4667.)

Dichosema subinerme (Leguminosæ).—A native of Australia, from whence it was obtained by Messrs. Henderson, of Pine-apple Place Nursery. It forms a branching shrub, having somewhat the habit of the Chorozema Henchmannia. The leaves are heath-like, half an inch long. It blooms in profusion, having long spikes of its pretty pea-formed flowers. Each blossom is about half an inch across, bright yellow, with a rosy-crimson zone upon the base of the standard and wings. It is a charming greenhouse plant, and deserves a place in every one. (Figured in *Mag. of Bot.*)

Diplacus glutinosus, var. grandiflorus.—Many of our readers have long known the pretty greenhouse shrubby plant which has borne the name of *Mimulus glutinosus*, but which has latterly been named *Diplacus glutinosus*. The one we now particularly notice is a variety whose blossoms are much larger than the original kind. The tube of each blossom is near two inches long, orange-red; the limb (end of flower) is two inches across, lobes deeply divided, of a yellowish-buff. It is a showy greenhouse shrub, blooming in profusion. This variety has recently appeared in some nurseries under the name of Diplacus leptanthus, but erroneously, that being a very different one. (Figured in *Paxton's Flower Garden*, 92.)

Double-blossomed Crimson Chinese Peach.—There is an excellent coloured plate of it in the September number of the *Magazine of Botany*. The flowers, however, are not a *full double*, nor are those of what is called the *double-blossomed white Chinese Peach*. Both, however, are very handsome spring-flowering ornaments. They flourish either in the open air, like the Almond does with us, or prove excellent ornaments, grown in pots, for the greenhouse or conservatory, bearing well to be forced, and under cover the flowers escape injury from frost or rain. They merit a place, where practicable to grow them, in-doors or in the open ground.

HARDENBERGIA OVATA ALBA.—A pretty twining plant, having *white* flowers with a green spot at the centre. They contrast strikingly with the blue and purple colours of the other species. It merits a place in every greenhouse.

MALCOLMIA LITTOREA (Syn. Cheiranthus littorea; Hesperis littorea).—This beautiful plant is a native of southern Europe, growing along the coasts of Spain and Portugal and other places. In England we treat the plant as an *annual*, but in warmer climes it is at least *biennial*—the lower part of the stems becomes quite woody. In England, as annual, it grows erect, about a foot high, and blooms freely, the flowers being in form like those of a *single-blossomed* Ten-week Stock, each blossom being nearly an inch across, of a delicate bright pink-purple. They are produced in open, terminal, many-flowered, and erect racemes. It is a very pretty flowering plant, deserving a place in every flower-garden.

MORMODES IGNEUM (Orchideæ).—A stove plant, from Central America. The flower-stem grows to about a foot high, and one of Mr. Rucker's bore a dozen large fleshy flowers, each blossom two inches across. Sepals and petals deep chocolate-coloured, and the lip a rich fiery orange-brown. Very pretty. (Figured in *Paxton's Flower Garden*, 93.)

MORMODES MACRANTHUM.—Its numerous flowers are borne in an open raceme, each blossom being nearly six inches across, of a deep chocolate-brown colour, and having a large oval lanceolate *flat* lip.

PELARGONIUM ATTRACTION (Kinghorn's Seedling).—The centre of each leaf is green, surrounded by a band of brown-purple and red, beyond which is the white margin. The flowers are of tolerable form, in large trusses, of a cherry colour. It contrasts very nicely with his Flower of the Day.

THYRSACANTHUS RUTILANS (Acanthaceæ).—A stove plant, from Columbia. It is half-shrubby, and produces terminal or axillary pendant racemes of numerous tube-formed brilliant crimson-scarlet flowers, each blossom being two inches long. It is a very ornamental plant. (Figured in *Van Houtte's Flore des Serres.*)

TROPŒOLUM DIGITATUM.—From the Caraccas. A handsome climbing plant, supposed to be perennial. The flowers have the calyx and spur a carmine-red shading off into green, and the petals are yellow, with a hair-like edge. It is grown in the continental nurseries, and is very handsome.

Noticed in the Royal Gardens of Kew.

The season has been very unfavourable for the blooming of the scarlet class of what is usually termed Geraniums. The best in these gardens are—PUNCH, which is unequalled; its *fine heads* of large excellent-formed rich scarlet flowers, borne, too, in profusion, are now

(September 20th) very ornamental. The petals are of good substance, and thus are not injured by the excess of rain, as the *thin*-petalled are.

QUEEN OF SUMMER.—This, too, stands the rain well, and a bed of it is now very showy.

FROGMORE SCARLET (the true) is also fine thick-petalled, and a free late bloomer. It grows *a foot high*. There is another variety, which grows from two to three feet, often sent out instead. The above two are also admirable for blooming well late in the season. So is the PURPLE AND LILAC UNIQUE.

MOORE'S DEFIANCE has foliage much like that of Unique; the flowers, however, are of a *bright red*, with a dark velvet spot on the upper petals. The petals are rather narrow; the flower, two inches across, and borne in profusion. It makes a fine show even now.

KING RUFUS.—The flowers are of a bright scarlet, foliage medium size, and thus the flowers show well; each blossom two inches across. The plant is very spreading, and blooms freely. It is now very fine.

LADY FLORA HASTINGS (fancy class) is an excellent late bloomer. In consequence of being short of plants, *the bed was thinly supplied*, and half its surface of soil being visible, spoiled its appearance. In planting beds with Geraniums, or any other of what are termed "bedding plants," there must be as many as will *nearly* conceal the soil at the time of planting, so that the extending shoots may intersect and form a mass of flowers. If thinly planted, the wind cuts between, and the bed looks meagre through the season; better have to thin out than lack sufficient quantity.

FUCHSIA PUMILA.—This is a very dwarf-growing variety, by some called Tom Thumb, Liliputian, or Minima. It grows in the bed here from six inches to a foot high, has narrow leaves and a *profusion* of flowers; tube and sepals scarlet, with a rich deep violet-coloured corolla. It is very pretty, and admirably suits the circular bed it occupies. It blooms all the summer.

MENZIESIA DABÆCIA.—This *most profuse* blooming Irish Heath forms a fine dwarf shrubby plant for a circular bed. The plants feather down to the grass, and are about two feet high at the centre of it. The beautiful *purple* flowers of one bed, in contrast with the *white* variety on the opposite side of a garden, produces a very nice effect. They are valuable bloomers for the latter part of the season; now in full bloom.

SWEET ALYSSUM.—The bed filled with this fragrant, *variegated-leaved* annual, and intermixed with the brilliant scarlet Verbena, is still very beautiful; the heads of Verbena flowers, just peeping over the surface of the white Alyssum, are very pretty. The blue-flowered Verbena, as well as bright rose one, also make a pretty contrast with this variety of Alyssum. Another bed of it had an edging of one of the dwarf spreading Lobelias, but it did not appear to advantage.

GERANIUM JUDY.—A bed of this is now very showy, the plants a foot high, and in profuse bloom; flowers a pretty salmon-red; contrasts well with Punch.

DRACOCEPHALUM MOLDAVICUM.—The numerous spikes of its light blue tubular-formed flowers render it a pretty dwarf bushy herbaceous border plant.

Persicaria orientale.—This hardy annual plant, at the back part of a long border of mixed flowering plants, produces a charming effect now. The plants are from three to four feet high, bearing a profusion of drooping coral-red flowers. There is a white-flowered variety, equally vigorous. In a mixed border of some extent, these plants appear in graceful elegance. We do not approve of a mixture of herbaceous plants among shrubs, but where such are desired these are very ornamental. In some beds of shrubs at Kew there are a number of the new tall tree-like Balsams, which bloom freely and are pretty.

Aster grandiflorus.—A beautiful Michaelmas Daisy, bushy, three feet high; a profuse bloomer. The flowers are two inches across, a light blue with a yellow centre. Very ornamental; ought to be in every garden.

Aster dracunculoides.—Three feet high; leaves narrow, flowers blue and violet, each two inches across, borne in profusion. Very pretty.

Aster Tradescanti.—Three feet high, blooming profusely, each flower being near two inches across, of a pretty rosy-violet. Very handsome.

Aster concinnus.—Three feet high; a profuse bloomer; each flower one inch across, light blue, with a bright yellow centre. Very handsome.

Aster Pyrenæceus.—Three feet high; free bloomer; each flower two inches across, of a deep lilac. Very pretty.

Campanula vincaflora.—A very pretty hardy herbaceous spreading plant, growing about half a yard high, blooming profusely; each flower an inch and a half across, of a pretty light blue. Now in fine bloom in the borders.

Hibiscus Syriacus.—The Althæa frutex is a well-known and admired shrub. There is a large oval-shaped bed of its species and varieties, and most of them have been for some time, and still are, in fine bloom. One plant, named H. flora alba grandiflora, is especially beautiful. Each flower is about five inches across, expands fully to view, of the *purest white*, with a large *dark crimson spot* at the base of each petal. It is a profuse bloomer, and very handsome. There are other fine kinds, which we will describe another month, as double blue, double white, double blush, double striped, double crimson, &c.

Colutea Pocockii.—This is a tree-like shrub, six feet high, very branching. The pinnate foliage is neat, and the outer shoots are laden with the pretty pea-formed flowers, of a chesnut colour, with a yellow centre. It is a charming flowering shrub for summer and autumn; now in profuse bloom, and valuable for near the house.

Leucanthemum lacustre. Ox-eye Daisy.—A hardy herbaceous plant, two to three feet high, blooming in profusion. Each flower is about *five inches* across. The centre is yellow, and the petals pure white. It is very showy, and, grown in contrast with the fine yellow Rudbeckias, produces a pretty effect.

TREATMENT OF THE GENUS ANECTOCHILUS
(ORCHIDACEÆ).

BY MR. JOHN BURLEY, FOREMAN AT THE WELLINGTON NURSERY, ST. JOHN'S WOOD ROAD, LONDON.

MANY of the readers of this Magazine have noticed in the Royal Gardens of Kew, or probably in some other celebrated collections of stove plants, the *rare* and handsome species of ANECTOCHILUS, whose leaves are so strikingly beautified with a surface of elegant net-work, displayed either by golden or silvery-coloured veins; and I hesitate not to state, none ever saw and examined, but greatly admired them. Being rare, little is known of their proper management; but having succeeded in growing them very much superior to any I have seen elsewhere, I forward the particulars of my treatment for an early insertion in your Magazine.

Mix two parts of leaf-mould (*half* decayed is best); one part of good peat, using it in its rough state; one part of sphagnum moss, with a little silver-sand and potsherds (broken small); the whole to be well mixed together. Then take the pot you intend growing the plant in, and put in a liberal drainage of broken crocks, upon which have a layer of moss, to prevent the mould being washed among and choking up the drainage. In the process of potting do not press the compost too tight in the pot, and let the plant be, when finished, about a quarter of an inch or so *above* the rim of the pot, so that the water may drain well from it. After potting, place the pot in another which is two sizes larger, and fill the space between the two with moss, slightly pressing it therein. This attention is essential to success, so that the soil may always be *kept moist*. Then, finally, get a *clear* bell-glass which is just large enough to cover the plant and *the pot that* CONTAINS IT; place it over the same, and it must be kept so, except for about *one hour* every morning.

The best situation to grow it in, during summer, is to have it in the *most shady* part of an orchid house, and, at the same time, in the *moistest*. The shining rays of the sun must be kept from it *throughout this period*, excepting for a *short time* in the morning and evening. During winter, however, it must not be shaded, but be in a more pleasant situation, where the rays of the shining sun reach it. In respect to watering, I recommend a *little* to be given at each time, in preference to what is termed a good *drenching*, as it requires to be kept *only just moist*. In watering, care must be taken that water does not fall *upon the leaves*, for it sometimes causes a spot to form, and thereby disfigure them.

The best method of increasing the plant is to take a side shoot from the old plant, with a rootlet to it, and treat it in all respects as above detailed.

I have already remarked that the leaves are particularly handsome, and in this alone consists their beauty, the flowers not offering the least attraction; so that when there is the appearance of a blooming stem, let it be immediately pinched off, and with the thumb and finger press the moisture out of the small part of the stem left in the heart of the plant, in order to prevent it rotting the entire, for it is very liable to rot if not so pressed. The plant, being thus prevented blooming, soon pushes afresh.

There are many kinds of these truly beautiful plants; a few of the following are worth cultivating, wherever practicable, and are not expensive, the prices varying from 7*s.* 6*d.* to 42*s.* each.

A. setaceus, from Java, in 1836; the gold-leaved; most beautiful foliage.

A. intermedia, also a gold leaf, rather freer in growth than most of the dark foliaged kinds.

A. pictus, 1843, also called Physurus pictus; this is one of the silver-leaved, having a very handsome blotch in the centre of the leaf.

A. argenteus, also called Physurus argenteus; this is the silver-striped, which is very easy of cultivation, from Ceylon.

A. Lobbianus, from Java, 1847, is a very choice species.

There are several other choice species, mostly introduced from Java and Ceylon, where, in their native homes, they grow in shady places by the sides of hedges, &c.

When properly grown, they are exceedingly interesting and beautiful, and very amply repay for any attention.

DESCRIPTIVE LIST OF TWENTY-FOUR OF THE BEST FORMED AND MOST DISTINCT VERBENAS.

BY MR. JOHN BURLEY, FOREMAN AT THE WELLINGTON NURSERY, ST. JOHN'S WOOD ROAD, LONDON.

EACH successive year, for the last ten years, we have had improved varieties produced by the cultivators of this very lovely flower; but during the years 1851 and 1852, the new ones sent out have been much superior beyond any equal period. An immense number have been raised and sent out during those years by the continental florists; and out of a host I have selected and accurately described twenty-four of the most superb, and which are deserving a place in every collection:—

Adonis (Boucharlat), white, beautifully mottled with lavender; fine close truss, good habit, and extra free bloomer.

Casanora, very dark purple-maroon, with a pure white eye, close truss, good shape and habit; very distinct.

Celina Mallet, the best white yet raised for bedding; free bloomer, and of compact habit.

Cerise Unique, bright cherry, with a yellow eye, moderate truss and good habit; an abundant bloomer.

Cleopatra (Nivert), very deep maroon, with a darker eye, an immense truss; very showy, and a good bedder.

Comte Desamy, fine rose, with a bright red eye, truss and habit moderate; a very striking variety.

Diana, shaded red, with a maroon centre, very large truss and a good habit; distinct and fine.

Etoile de Venus, pale flesh, with a rose eye, an immense truss, and a good bloomer.

Juliette (Nivert), fine maroon, good shape and habit, extra large truss, and one of the best flowers of this season.

La Camargo, blue, with a dark eye and a white ring surrounding the eye; a distinct and good bedder, and free bloomer.

La Flamboyante, a good scarlet, with a truss and habit of the best class.

Madame Denis (Denis), cherry and rose, mottled, with a bright red centre.

Madame Legros, pure white, striped with lilac, good truss and habit; very distinct and fine. This variety has the appearance of a Phlox Drummondii Mayii.

Madame Luther, white, splashed and mottled with lavender, and a violet centre; profuse bloomer.

Mazeppa, rosy-pink, with a dark centre; good variety for bedding.

Mirabeau, good crimson-scarlet, close truss and habit; fine for bedding, being very compact, and a free bloomer.

M. Jullien (Young), fine scarlet-crimson, with white eye, moderate truss, and free bloomer; good foliage and habit.

M. Paquin, violet-blue, with a fine white eye; splendid shape, with good truss and habit.

Petrus Morel, a beautiful pink, the finest of its colour in cultivation; good truss and habit.

Racine, fine bright rose, with a dark centre, good truss and habit; one of the best of the season.

Richelieu, very deep maroon, immense truss; strong grower, profuse bloomer, and a good bedder.

Tenerus, bright rose, good shape and truss; free bloomer.

Zelia, fine rose, with a dark centre, good truss and habit; a great improvement on Macrantha.

Zenobia (Boucharlat), violet, beautifully mottled with lavender, and a dark crimson eye; fine truss and habit.

THE AUTUMN-BLOOMING CROCUS.

BY A COUNTRY CLERGYMAN.

I HAVE taken the numbers of this Magazine from its commencement, twenty years ago, but do not recollect seeing the name even of Autumn Crocus anywhere, except on the advertising sheets. I do not find its name in the Indexes.

This week I was visiting a friend who has a fine collection of nearly all the prettiest exotics, as well as flower-garden plants, and I was particularly pleased with a beautiful display of several kinds of Autumn-blooming Crocus. The bloom of the principal part of the border herbaceous plants was over, but the beds had still a most cheerful appearance by a profusion of these lovely Crocuses. Every garden ought to contain a collection of them, especially if near to the dwelling-house. My friend had a considerable number, too, in pots, which were kept on the north side of a wall. He had some which had been put into the greenhouse, and along a terrace in front of the house; they had a very cheerful appearance. Those remaining behind the wall being kept back, are brought forward in succession, and he thus has them in bloom till after Christmas.

He grows them admirably in a rather dry but *deep* loamy soil, and his gardens are well sheltered on all sides, except to the south. Those in pots have a liberal drainage. He keeps them in a cold pit or frame during winter, when not in bloom. They increase freely by offsets. He has ten species and varieties—blue, purple, lilac, rosy-lilac, and white—of various shades. He has this season raised a number of seedlings from the autumn-blooming having been impregnated with the spring-blooming; the latter he had forced into bloom in order to obtain the pollen. Next year he expects to have a number of them in bloom. and hopes to possess the autumn-bloomers having the colours of the spring-flowering.

THE PLEASURE-GROUND.

(*Continued from p.* 232.)

The representation of flowers is the proper style of drawing for the softer sex. A pursuit of this nature is the peculiar province of the Fair, and the nearer their imitation approaches to nature, the more it delights us. The beauty and grace that may be displayed in grouping flowers, united with the gaiety of their colours and the harmony of their tints, are well worthy the attention of those who were born to render life delightful. The neatness, nicety, and patience required in finishing flower-pieces, seem to demand the delicate hand of a female artist.

The description, by Moses, of the garden of Eden, the first abode of first created man, formed the outlines which Milton has so splendidly enriched with all the imagery of poetry. From this have been copied the plantation, the park, and shrubbery, so justly the pride of the nation, and so properly the abode of its beauty. The Greeks devoted their terrestrial groves, as well as their celestial gardens, to their gods; and the Mahometans reserve their flowery lawns and umbrageous bowers for scenes of future bliss to mortal believers. We, however, collect all such blessings, which bounteous nature has scattered over the globe, and in this present life forms a modern garden, worthy of our admiration, and deserving of our care.

Some of the pleasure gardens of antiquity were created for, and devoted to, the pleasure of the softer sex. Solomon has celebrated those of Jerusalem in song, and the extraordinary gardens of Babylon appear to have been formed by Nebuchadnezzar for his Queen.

The Romans, in our own country, used to attach a pleasure-garden to their villa, and even to the convents and monasteries.

The citizens of London had gardens to their villas as early as the time of Henry II., which Fitz-Stephen tell us were, "large, beautiful, and planted with trees." In Cerceau's Architecture, which appeared in the reign of Henry III., every ground-plot was laid out with plans of labyrinths and parterres.

The royal gardens of Nonsuch, in Surrey, were formed in the time of Henry VIII. The privy gardens of that palace were planted with flowering shrubs and fruit trees, and ornamented with basins of marble, fountains, and pyramids. The gardens of Hampton Court were also planted about the same period, by Cardinal Wolsey; and from that time to the present, the taste for ornamental trees and shrubs have continued to increase.

Charles II. returned from the continent with a taste completely French; Evelyn also, from his travels through France and Italy, during the Commonwealth, imbibed similar ideas. Thus our plantations at that time consisted entirely of long, dull avenues, and our pleasure gardens of clipped hedges, walks laid out upon geometrical principles, and evergreen trees shorn into fanciful and ridiculous figures. Le Notre who planned the celebrated gardens of Versailles, came over at this time to England, by desire of Charles, to plant the parks of Greenwich and St. James's.

Early in the eighteenth century, the formal and heavy style of gardening which had for some time prevailed, was changed by the united efforts of the English poets and painters of the day. By their pure taste and united efforts, they gave birth to that classical style of planting which has since been so much admired and imitated throughout the most refined parts of Europe.

Whilst Addison was forming a rural garden at his retirement at Bilton, near Rugby, Pope was employed in laying out a picturesque plantation at Twickenham. At the same time, with their pens they engaged in open war against the right angles and disfiguring shears of the gardeners of their day, against whom they levelled some of the keenest shafts of their ridicule. These geniuses were seconded by Kent, who as a painter and architect, was adapted to embody their imaginations. In his capacity of landscape planter, he laid out the grounds of Claremont and Esher, about the year 1730; and as he painted the hall at Stowe, it is probable that he assisted Lord Cobham in the grouping of his plantations also, which had been commenced on the modern land about the time Pope was forming the gardens at Twickenham.

We are informed by ancient historians that the Persians of old had parks, which contained animals of the chase; and the Romans had similar enclosures for the same purpose. It is generally supposed, that the park at Blenheim is the site of grounds that were once used by that people for hunting. It is also conjectured to be the same spot which formed the park of Henry I., who we are told had a park at Woodstock.

It will be necessary now to make some observations on the formation and planting of the pleasure-ground, and remark upon what trees assimilate best in neighbourhood. The style of this sort of garden must depend so much on the extent, situation, and character of the ground, that it would be absurd to offer more than general remarks.

The plantation should be carefully made to suit the building it is to surround. As the villa and ornamental cottage form the largest portion at present of edifices that claim a pleasure-garden, we shall confine our observations to the grounds attached to these dwellings. As such houses are generally built on situations too flat to admit of much variety, the first study should be to find how and where we can break the level by throwing up elevations, so as to answer the double purpose of obscuring private walks, and screening other parts from the wind.

(*To be continued.*)

TREATMENT OF BORONIAS.

BY THE FOREMAN OF A LONDON NURSERY.

The Boronias are very neat growing greenhouse shrubs, and worth every attention to grow them successfully. No doubt many readers of this Magazine will be acquainted with the circumstance, "that plants of this genus are very liable to die off suddenly."

This failure arises from improper management, and not from any predisposition in the plant. By the following mode of treatment, they will flourish to any desired age or size. I have raised and grown thousands of them, with perfect success.

To begin with *young plants*, I must remark,—take care not to *overpot* such. Such as are just struck, pot into *small sixties;* when tolerably well rooted in them, repot into *large sixties.* Do not repot later than September, better keep them in the small sixties till March, than repot late in Autumn.

Always have *clean pots,* and if new ones, let them be soaked in water a day before using, and then well dried before used in potting; never neglect this attention. Particular care must also be paid to have a *liberal drainage,* the pot must have about one-fourth filled with broken pot, over which must be a layer of moss, to prevent the compost being washed among the broken pot, and so choked as to prevent the water duly passing away, and causing the compost to become soddened. The compost should be good turfy sandy peat, procured a few months before using and having been in a heap, turned and chopped a few times. To this add one-third of bits of charcoal, porous stones, brick, &c. The peat must be in a *rough and open state,* and these bits of charcoal, &c., be properly mixed up with it. Two circumstances contribute to the sudden death of a plant. If the soil becomes *soddened,* the excess of water for only a few times, will destroy the plant. On the contrary, if the plant *flags* a few times for want of water, it will soon perish. Being liable to these casualties, care must be taken to have a good drainage, and an open compost to grow in. The porous bits of charcoal, stone, and brick, absorb and *retain* a quantity of the water given, and the roots obtain a due supply of moisture therefrom, when even the peat may have become quite dry. Never allow the surface of the compost in the pot, to become *hollow* around the stem of the plant, or too much water will sink there, and in a short time the plant will perish. Soft water is essential, and in the Spring, when the plants have begun to push, once a week give a watering of weakish liquid manure. Whenever the roots appear in a mass at the outside of the ball, which will be seen by turning out carefully, then repot into a size larger, or with vigorous plants two sizes. I repeat, "*guard* against overpotting, and have an open compost and drainage, then the plants will flourish, having a due supply of water." In hot weather they like a syringing over head, just after the sun disappears from them. Get the new shoots well ripened before winter, then a profuse bloom will be obtained. In order to keep a plant bushy, stop the leading shoots. The plant bears having the shoots cut back, to form it anew. Young half-ripened shoots, two inches long, strike freely in silver sand.

THE BEAUTY OF CLIMBING PLANTS, IN THE PLEASURE GROUND, OR FLOWER GARDEN.

BY A COUNTRY CURATE.

Of the numerous forms and modes of growth which plants exhibit, the climbing or twining habit appears to be the most graceful and interesting. As man is accustomed to regard more tenderly and fervently such objects as depend upon, or, as it were, cling to him for protection and support; so, in the vegetable world, those plants appear to excite the greatest interest which require the assistance of their more robust neighbours to maintain them in their needful position, and uphold them from grovelling prostration. There is, however, a general gracefulness and beauty in the plants of this class, and I have always observed that climbing plants are acknowledged favourites with persons of refined taste and sensitive minds.

Their sprightly and elegant disposition, the enchanting irregularity and negligence with which their branches are arranged and entangled, and the beautiful manner in which the extremeties of these protrude, so as best to exhibit their varied blossoms, each contribute to heighten their attractions. I now allude chiefly to their appearance in a natural state, for when subjected to the operations of training and pruning, it deprives them of much of that pleasing simplicity which otherwise characterizes them.

It is to be regretted that many kinds of vigorous growing plants are trained to walls and trellises which ought not to be substituted for that which nature teaches us is the most graceful and ornamental with them, and by far the best adapted to the purpose of displaying their peculiar habits and beauties by supporting them by poles. There are others of a more delicate habit which look more ornamental, and exhibit their blossoms more to view, such as the delicate Tropœolums, &c. The natural habit of every plant ought to be allowed, if to have it in perfection, only to accommodate it so as to be kept in those bounds which other circumstances point out as necessary.

The natural habitats of all our general climbing plants I cannot describe, but most of the readers of the Cabinet have witnessed the common honeysuckle, twining closely around the stems of trees, and often interweaving its slender branches with those of the tree to which it clings for support. Those plants which have not the advantage of trees, will attach themselves to the nearest shrub, and there exhibit their beautiful flowers among the branches, or if not thus privileged, will trail along the ground. So far as their general mode of growth is concerned, this may be considered a fair type of most climbing plants; all are incapable of supporting themselves in an erect position, and consequently, are not frequently met with, except where trees or shrubs exist or abound.

These circumstances very naturally suggest the idea of encouraging them to ascend poles when in a state of cultivation. And though it might be supposed that similar plants require a shaded situation: this is not always the case, at least with those from temperate climates. For although found growing naturally beneath the shade of trees and shrubs, they are always seen struggling *to obtain an exposure*, and either protrude their shoots through the opening branches, or rise above the summits of their supporters.

Climbing plants of the honeysuckle tribe are best adapted for planting at the base of small trees in a conspicuous place in the shrubbery, and to these they may be allowed to attach themselves; or, if necessary, can be secured erect till they have embraced them sufficiently to render further attention needless. It is particularly advisable to permit them to commence twining themselves; as many of them grow in a peculiar direction, which, if altered, would considerably retard their progress and detract from their beauty. No just conception can be formed of the great additional charms they would impart to the shrubbery; for when they had become firmly established, and had grown to their natural size, the trees or shrubs would be seen covered with an extensive variety of showy flowers, and present an appearance at once beautiful and interesting. The usual sheltered situation of shrubberies, or the protection which the shrubs themselves would afford, render it probable that many half-hardy climbers (and now we have many new and beautiful ones,) too might be grown within their boundary, provided the mode of growth were congenial to their habits; and even with no other variety than the hardy species of Clematis, &c. presents, these departments might be converted into decided and lasting attractions.

There is another description of climbing plants, however, which from their natural disposition to branch, or in which such a tendency may be readily induced by pruning, possess peculiar adaptations for training to detached poles; and it is to these species, and the mode of supporting them, that I am desirous more especially to call attention. No person, but who has seen this system successfully practised, can possibly have any idea of the effect which a *pillar of roses*, or similar plants produces, when all their branches are bending to the earth, as it were, beneath the weight of the multitudes of flowers with which they are laden. And when poles are placed at a convenient distance apart, so as to have *festooned cords* to which the shoots are trained, the pendant shoots in profuse bloom, give to the uprights an additional interest.

Their appearance, whether in the flower bed, around a flower garden, in the lawn, or whether arranged opposite each other on either side of a portico, an entrance, or a walk, or disposed solitarily and irregularly over any part of the pleasure-ground, is most interesting. Roses thus treated, have all the concentrated beauty of the head of a standard elongated into a pillar, without any of the formality of its summit, or the bareness of its stem. When growing climbing roses to poles, &c., it is necessary that a situation be chosen for planting them where they will be *slightly sheltered from winds;* but at the same time not to screen them from the full influences of the sun, otherwise their shoots will be very liable to suffer from cold during the winter, on account of not being *thoroughly matured*. A strong loamy soil is the best for growing them in, so as to flourish luxuriantly.

Poles of the requisite size and strength may be easily procured from the thinnings of larch plantations, and they will stand for many years without renewal. It is best to leave some of the branches about six inches long, as they will prevent the wind twisting the shoots around the pole so as to damage them. The bark should not be removed; both for durability and appearance, it is far preferable to allow it to remain. Care should be taken to apportion the length and strength of the poles to the estimated height of the plant, for they will look exceedingly clumsy and unsightly if too large or too long, and the habit of the plant should be known. Some of the hardy Passion Flowers, Glycine sinensis, Bignonias, Solanums, Fuchsias, Clematis, Cotoneasters, Pyrus, Pyracantha, Ribes speciosum, the Fuchsia flowered, and in a warm situation, the Eccremocarpus, Tropœolum pentaphyllum, and for Summer only, T. Lobbianum, T. Canariense, &c., are most interesting when trained as above, and make a splendid display when attached to a pole; most require to be freely pruned, as it is by close pruning that they can be induced to flower freely.

REVIEW.

The Beauty of Flowers in Field and Wood, containing the Natural Orders or Families of British Wild Plants, with their Moral Teachings, Illustrated. Designed to make Botany simple, and Field and Wood Rambles instructive and agreeable. By John Theodore Barker. Bath, Binns and Goodwin. London, Whittaker and Co. Edinburgh, Oliver and Boyd.

To the reflecting mind, the distribution of flowers over the surface of the whole earth, their spontaneous growth on the mountains, in the vallies, o'er the plains, the rugged rocks, the fields, woods, and hedge-row sides, as well as in the cultured ground, are full of interest. Who can look upon a flower, examine its perfection of structure, notice minutely its parts and elegance of form, its diversity of colours, but must be filled with admiration, and if flowers are not exactly to minister to man's actual wants, yet he will feel assured that they were so variously formed, and profusely scattered, to add to his delight by beautifying the world.

How pleasing and instructive to ramble amidst such charms, deriving both pleasure and profit thereby, and Mr. Barker has, in his elegant well written book, provided the most pleasing British floral companion that we have ever had, and we respectfully recommend an early acquaintance therewith by all our readers. The work is in Crown 8vo., and contains 260 pages; with ten coloured Plates, illustrative of the various parts of plants, flowers, and foliage. The style of the subjects treated upon is distinguished by clearness and simplicity. The plants are described according to the NATURAL SYSTEM OF CLASSIFICATION, which system is,—1st. Briefly explained. 2ndly. Method of classifying Plants into Families, &c., detailed. 3rdly. A concise description of the *Families*, *Species*, and *Varieties* of our most interesting British wild plants is given. The entire is written in an agreeable and useful style, and all the most interesting families of plants are illustrated by some extracts of beautiful and appropriate Poetry.

MISCELLANEOUS SECTION.

HIMALAYA AND THIBET.—The Valley of Cashmere, by some thought to have been the site of the Garden of Eden, hardly realised to Dr. Thomson the expectation which previous accounts had led him to entertain.

"My first visit was to the lake, and to the celebrated gardens on its northern shore, which were the delight of the emperors who made Kashmir their retreat from the heat and cares of Delhi and Lahore. The southern part of the lake is very shallow, and I sailed, along narrow channels, which separated large patches of tall reeds, among which a very narrow-leaved Typha and an Arundo were the commonest plants. Three or four species of Potamogeton were abundant in the lake, just coming into flower, but most of the water-plants were only beginning to vegetate. I saw three or four flowers of a Water-Lily (Nymphæa alba), and could just recognise Villarsia nymphæoides, Menyanthes trifoliata and Trapa, all of which had been recorded by previous travellers as natives of Kashmir. I looked anxiously for Nelumbium, but saw no signs of it, except the withered capsules of the previous year, many of which I observed floating on the lake.

"The gardens of Shalimar and of Dilawer Khan rise in a succession of terraces from the margin of the lake. They are laid out in a stiff formal style, straight walks crossing one another at right angles, and are irrigated by means of straight water-courses, branching from a long canal which passes down the centre, through a succession of ponds well built in masonry, and provided with artificial fountains, which are made to play on festivals and holidays. Pavilions of fine marble occupy the intersections of the principal walks. Magnificent plane-trees form the chief ornament of these gardens, which are now much neglected; straggling bushes and a wilderness of weeds occupying all the less conspicuous parts, while the main avenues alone are kept a little neat.

"Although the chief beauty of the valley of Kashmir is undoubtedly the magnificent girdle of snowy mountains by which it is surrounded, the orchards and gardens, which are still numerous in the neighbourhood of the capital, are charming spots, and the more so from the contrast which they present with the barrenness of the surrounding country, and the absolute ugliness of the swamps in the centre of the valley. Nor should it be forgotton, when we compare the accounts given by early travellers with the impressions made upon us by the present appearance of the valley, that Kashmir is no longer in the same state as it was in the days of the emperors; a long continuance of misrule, under a succession of governors, whose only interest it has been to extract as much revenue as possible from the unfortunate inhabitants, having produced the only conceivable result, in abandoned cultivation, a diminished revenue, and an impoverished people."

The Valley of the Chenab was very different.

"From the great elevation of the mountains which I had just crossed, I was prepared to find a marked change in the aspect of the vegetation, and I was not disappointed. The steep slopes were covered with a most luxuriant herbage, about two feet in height. A tall panicled Rheum was very common, and numerous Umbelliferæ, Silene inflata, Geranium, and Pteris aquilina were abundant. The most remarkable plant, however, from the extreme quantity in which it occurred, was an Asphodelaceous plant (Eremurus, Bieb.), the long scapes of which, from four to five feet in height, covered the hill-sides in countless myriads. These scapes were clothed, for nearly half their length, with a profusion of elegant white flowers, very slightly tinged with a pale yellowish green. I met, during the day, with most of the characteristic plants of the Kunawar flora; as instances, I may mention Ephedra, Dictamnus, Rosa Webbiana, Dianthus, and Scutellaria orientalis. The arboreous vegetation was much the same as on the other side of the pass. The right side of the ravine was well clothed with Pines, of all the four ordinary species; the left side was usually bare, the northern faces of the spurs, which are generally wooded, being too precipitous, but in the hollows there were a few small clumps of trees, principally Pine, Walnut, and Sycamore."—(*Western Himalaya and Tibet; a Narrative of a Journey through the Mountains of Northern India.* By T. Thomson, M.D.)

THE MANETTI ROSE-STOCK.—It is asked if Roses worked upon this stock die off after three or four years' growth? I have now used the Manetti stock for at least seven years, and after I had once began to send out plants upon it, my customers (or at least those of them who had a sample) would never take plants upon the Briar. I have now fine large bushes on the Manetti, at least five or six years old, which are as healthy and vigorous as they were the first season, and which form a fine contrast (on a border of specimens) with the majority which are on Briars, and some of which are annually dying, and others monthly choked with suckers. One of the best properties of the Manetti stock is the freedom with which it swells annually with the growth of the bud. As a pot stock it is invaluable; it makes such fine fibrous roots, and is so clear of suckers; and in pots it may be "worked" 10 months out of the 12. I have formerly said a good deal in favour of this stock, and now, after seven-years' experience, I think more highly of it than ever.—*Thomas Appleby, York, Gardener's Chronicle.*

ON THE PERIODICAL EMISSION OF THE ODOURS OF PLANTS.—It is a well-known fact that many plants give off the most powerful perfume in the evening and night-time. This phenomenon has been attributed to various physical causes, arising out of peculiar conditions of the atmosphere, &c.; but little is known on the subject, and some observations, published several years ago by Professor Morren, seem strongly opposed to any physical explanation of the facts. It had been supposed that flowers merelygave out the more powerful odour at night on account of the volatile perfume being less quickly dissipated at that time than when the sun was above the horizon. It was also a question whether the condensation of the atmosphere during the night might not be the cause of the increased power of the scent. Orchis bifolia occurs abundantly about Liege in spring, and its white flowers, which are quite scentless during the day, give out a pleasant, penetrating aroma in the evening, and especially about eleven o'clock at night. Professor Morren convinced himself by five days' observation that the perfume began to be manifested at twilight, exhibited the greatest energy at the time when the darkness of night prevailed, and decreased with the dawn. Two spikes of flowers of this orchis were placed in two cylindrical glasses filled with water, in which the plants were totally submerged. One glass was placed so that the sun might shine upon it all day, the other was kept in the shade. Any scent emitted from these flowers could only be perceived through the water by which they were covered. As evening came on a delicious aroma became evident, and was emitted throughout the night, being lost at sunrise. This proves, says Professor Morren, that the condensation of the vapour has not the slightest influence upon the perception of the odoriferous constituents by our senses. It further proves, in regard to the plants exposed to the air, that neither the evaporation of the particles nor the accumulation of them on the parts of the plant where they have their origin is the cause of the periodical absence and recurrence of this exhalation; so that the explanation of this phenomenon must undoubtedly be sought in physiological facts.

Professor Morren made another experiment. The blossom of Maxillaria aromatica is well known for its strong odour of cinnamon, so that two or three flowers will scent a whole conservatory. And it is well known that in the fertilization of the orchideæ the deposition of the pollen on the stigmata is effected very quickly, that the pollen-tubes elongate in less than one hour, the flowers and the perianth begin to close, and the columella shoots up. In a plant bearing many flowers, examined by Professor Morren, the scent was strong, penetrating, agreeable, and resembling fine cinnamon. The unfertilized flower retained this odour day and night, morning and evening, for eight days. Each flower that was fertilized by Professor Morren lost its odour in half-an-hour after the operation, and never gave further signs of it. This fact seems alone sufficient to prove that the emission of the odour is a vital phenomenon.—*Magazine of Botany.*

GROUPING TREES IN PARKS.—The late Mr. Gilpin had a very good plan of forming groups in parks; he first determined on the positions where two, three, or more would be effective, and not far from each other; he planted these with trees of the desired kind, and of a permanent character, and then enclosed a rectangular figure around them, filling up all the intervals with trees of very rapid growth, and with Gorse, Broom, &c., as nurses.

THE DEODAR.—Not being aware that the Deodar has fruited in this country prior to this date, I have thought it might be interesting to know that a fine tree of this beautiful Conifer, twenty-eight feet high by twenty-three feet through, is producing abundance of cones here at the present time.—*T. R., Bury Hill, near Dorking.*

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

HOLLYHOCKS.—*Now* make new plantations of these noble flowers. Auriculas and Polyanthuses, Carnations, Pinks, &c., should be placed in their winter quarters, in a dry, sunny, sheltered spot, but, at the same time, where a free circulation of air can be admitted on all proper occasions. The surface soil must be loosened, and a slight sprinkling of fresh compost be spread over it. Any plants out in the open beds, as Lobelias, &c., should be taken up and potted, for winter preservation, in pits, frames, &c. Chrysanthemums grown in the open ground, and required for blooming in-doors, should be taken up as entire as possible, and be potted with due care. All tender kinds of plants, as Scarlet Geraniums, Verbenas, in fact every kind requiring winter protection, should be housed *immediately;* it is bad policy to put it off a single day longer. Already we have had strong frost, which has injured the tender things in some places. All plants like light; place them as near to the glass as convenience will allow. Tender Roses, grown out-of-doors, should have protection over the roots, &c., or be taken up and housed. Prepare the Tulip-bed.

DAHLIAS.—Let the *crown* of the roots be covered with a few inches deep of soil around the stems. Beds of Pansies may be made. Shrubs of all kinds may be planted. Roses now planted SOON PUSH NEW ROOTS, and become well established before winter; the soil being somewhat warm, excites the roots immediately. Pinks, also, may be planted in beds.

SHRUBS, &c., FORCING FOR WINTER BLOOM.—Such as are to bloom early should be gradually prepared, potted immediately, if required, and by the middle of the month introduce such as are desired to bloom by Christmas into the house or pit. The kinds which are well deserving such attention are Roses, Honeysuckles, Jasmines, Poinsettias, Azaleas, Kalmias, Persian Lilacs, Andromedas, Tree Carnations, Pinks (of which Anne Boleyn is the best), Rhododendrons, Rhodoras, Deutzias, Ribes, Spirea prunifolias, Mezereums, Gardenias, Cupheas, Heliotropes (the new blue is fine), Scarlet Pelargoniums, Cactuses, Eranthemums, Justicias, Salvias, Gesnerias, Correas, Chinese Primroses, Aconites, Mignonette, Primroses, Cinerarias, Stocks, Persian Iris, Crocuses, Cyclamens, Sweet Violets, Hyacinths, Lilies of the Valley, &c. Seeds of many annuals should now be sown in the border, and others in pots; such will bloom early next spring. Brachycoma, Schizanthus retusus and Hookerii, Rhodanthe, and Salpiglossis, seeds now sown, plants potted off when strong enough, will bloom vigorously next spring.

IN THE GREENHOUSE, &c.

If the stock is not housed, it ought to be done immediately. Care must be taken so that one plant may receive something like its proper treatment without interfering materially with the well-being of its neighbours; and the tender ones must be placed in the best part, for protection from cold wind, &c., as Polygalas, Pimeleas, Leschenaultias, Aphelexis, Boroneas, Gompholobiums, and Diosmas, are injured by being placed where there is a *current* of wind. Let each plant have all the space possible, and the robust large-leaved kinds, and the very slender delicate sorts, should be kept as separate as can be arranged, so as to allow a due circulation of air. Be careful that the pots, &c., be perfectly clean before arranged for their winter situation. Repot Cinerarias, &c. Let Camellias which are to bloom early be placed in a warmer situation, also any Chinese or Indian Azaleas, so that they may be gradually advancing. In watering the stock of plants, let it be done in the *early part* of the day, so that any excess may be dried up before evening, and damps be avoided, otherwise mouldiness will ensue. Thin away the flower-buds of Chrysanthemums; water occasionally with liquid manure. Calceolarias strike root freely; now pot off seedlings to bloom next season.

PELARGONIUMS.—The plants headed down some weeks back, now have pushed shoots an inch or two long; these should be thinned properly. The plants must be repotted, in order to have the roots well established before winter. Shake off the soil, and shorten some of the long roots, so that young fibres be promoted, which is essential to the vigour of next bloom. Have a free drainage in the pots. If a compost such as is recommended by Mr. Cock in a former number is not possessed, then take turfy-loam well chopped up, with an equal portion of sandy-peat and well-rotted leaf-mould, and half the quantity of well-rotted dung. Give air to the plants in the day-time, and be careful not to give over-much water at the roots, for if saturated they will be injured. Young struck plants should have the tops pinched off, to cause the production of side-shoots, to render them bushy for next season. Repot some of the SCARLET GERANIUMS (so called) to bloom during the autumn and winter; they are charming ornaments. So with *the new Tree Carnations*, of which there now are many very beautiful distinct varieties.

BRIEF REMARKS.

SUCCESSFUL TREATMENT OF GLOXINIAS.—Towards the end of February, turn the bulb out of its pot, and shake off all the old soil, cutting away, too, the old dead roots, and then repot it in a light rich compost, having a free drainage. Now place it in a *gentle heat*, and keep it *just moist enough* to excite growth. If only one shoot is produced, it should be stopped when an inch or two in height, leaving a pair of leaves only on it. At the base of these two leaves there are buds, and these buds will soon break and produce two more shoots when these have grown two leaves each; then repot the plant into a pot two sizes larger, and tie out the two shoots a little distance from each other. Nurse the plant carefully with water, but do not deluge it, and place it as near the glass as may be safe from cold. When a third pair of leaves are produced, nip out again the buds at the top of the two shoots, and allow two more shoots to grow to each, till each has two more leaves upon it; then repot again into a pot two sizes larger; this will be a sufficient shift for the first season, and the plant so grown will produce four spikes of fine bloom. If the bulbs are larger, they may probably send forth four or five shoots; then repot, tie them out, nip off the tops, and by that means double the number of flower spikes. The great point is to keep the plants from flowering, by inducing free growth and fine foliage, before the flowers are allowed to appear. The larger the bulbs (and they will become larger every year), the greater the strength and number of the flowers produced. Perhaps there are no plants that ought to have their leaves kept more moist than Gloxinias. I syringe them three or four times a day with the greatest success and most perfect safety. The leaves prevent too much water penetrating to the roots, or this excessive watering with the syringe will be injurious instead of beneficial. When the bulb pushes up too many shoots, thin them, so that the strongest plant should not have more than five or six of these shoots left on it to bear flowers; those left should be tied out almost horizontally, leaving out one or two in the centre, to fill up the vacancy. When the plants are in flower, the syringing must of necessity be discontinued, or else it will injure the bloom.—*An Extensive Cultivator.*

CULTIVATION OF THE POLYANTHUS.—Complaints have often been made relative to the failure in cultivating these lovely flowering plants. A writer in the *Midland Florist*, who has long grown them most successfully *out of pots*, has given the particulars of his mode of treatment, from which we extract the following —" Select a spot open to the sun throughout the winter, and free from overhanging and drip of trees; mark two feet in width, any length required, allowing eighteen or twenty inches for path—one end of the bed to point east, inclining a little south, the other end will be, of course, west, the same inclination north, which will give the required aspect. Measure the length marked out, and procure some fir poles, four inches thick and five feet long; have them sawn down the middle, and thus each will make two posts, one of which will be required to every three feet your bed is in length, and one over. Provide also some strips of red deal, one inch thick and two broad, for edging the bed in front and at both ends; and a few stakes, one foot long and two inches thick, to be driven down about three feet distant, to the extent of the bed, and the strips nailed on outside, next the path; also four pantile laths, the full length required from end to end. If the ends of the posts, stakes, and strips of deal are brushed over with hot gas tar, mixed with one-fourth of linseed oil, a few days previous to being put down, they will last much longer. All being in readiness, stretch a line, three feet six inches high, from end to end, to the extent of the back or south side of the bed; then put down the posts, till the tops are even with the line, and fasten them firmly; then nail thereon the pantile laths, commencing six inches from the surface of the bed for the first, and the rest following with equal space to the top. Dig out all the soil a foot deep, clear and regular, and put in a layer of any decayed vegetable refuse, such as hedge clippings, rotten sticks, or the like, that will admit of pressing down equally all over with the back of the spade, till about three inches thick. Upon this a moderate quantity of soot should be sprinkled regularly all over with the hand; then a stratum of well-decayed cow or pig manure, the same thickness as the vegetable refuse. This also must be sprinkled with soot, but very slightly, or it will injure the plants. It is to prevent worms rising, which often make sad havoc in a newly-planted bed, by rooting up the plants and dragging them into their holes. If on cold clay land, use sheep manure, mixed with one-fourth of sandy-turf. Fill up the bed to within an inch of the top edge of the strips (which may now be put down for border or edging for the bed) with fresh fibrous loam that will easily divide with the fork or hand; then rake all over carefully, and put on a riddling of nice light soil, free from manure, one inch thick. This completes the bed ready for planting.

" Some good strong plants of the double-flowering Currant, planted at the back or south sides of the laths, two feet distant, blooming with the Polyanthus, adds much to the beauty of this early 'treat,' affords good shade in summer, and, losing its foliage in winter, gives access to the sun's rays, and is in all respects the best thing I know of for the purpose."

THE DAHLIA.—Having been a very successful cultivator and exhibitor of this fine autumn flower for several years, and the size of my blooms generally having attracted much notice, I beg to offer a few brief remarks upon its culture, more especially as respects watering. I have tried all kinds of manure water, likewise guano, but I have found nothing as yet equal to soot-water and soapsuds. It is a general rule with most growers to place half-rotten manure round the roots, and then draw the earth up so as to form a basin, a practice which is greatly required; but there is an evil attending it, for oftentimes when the roots are taken up to be stored, they are found to be very much cankered or warty, and hundreds of worms are also discovered there. By watering with soot-water and soapsuds the roots will be perfectly clean and free from all insects, and much larger flowers may be expected. The most successful traps for earwigs I have found to be the bloom-stalks of Hog-weed, or Rhubarb, &c., dipped in milk, to soften the pith, which earwigs are particularly fond of; blowing them out of the stems into a bottle, and pouring scalding water on them, is the quickest way to dispose of so great an enemy.—*E. Bennett, Perdiswell.*

Destroying Red Spider.—As an original subscriber to your Magazine, which has done so much to stimulate the love of gardening and flowers, may I take the liberty of asking information of you on a single point? In your number for August, in specifying a recipe for destruction of the *red spider*, that inveterate pest, you mention lime and sulphur, mixed, as an effectual application. Will you kindly inform me in what proportions the lime and sulphur should be used; for instance, to 1 lb. of lime how much sulphur; and how much of each for a greenhouse thirty feet in length? May all the plants be left in a greenhouse, during the smoking, with impunity?—*Wm. Martin, Paisley.*

[Sulphur may be mixed with lime (or any similar material) and water, and any part of a plant-house, or plant, be smeared over with the mixture, but it will not affect the red spider or other insect, unless such a *degree of heat* act upon the sulphur as to produce a *gaseous volatile fume* therefrom; it is the *fume* that *destroys* the insect. When sulphur *burns*, its fumes are, in proportion to *heat* and *quantity*, powerful, and will not only destroy animal life but vegetable too. When sulphur is *exposed* to a temperature of 302°, it will spontaneously ignite, and at higher degrees the *fumes* will ignite also. But whilst there is danger in using it, it can be so regulated as to be effectual in the case of insects, and the plants be preserved from injury. For many years we have known the following plan to be most successful every way:—To one gallon of rain or pond-water, one pound of the flour of sulphur, and as much quick-lime in a powdered state added as will make the mixture of the consistency desired to paint or smear over the flue or hot-water pipes, &c. The fire flue is always hottest nearest the fire, and to a few yards of that part the mixture is not applied. Sulphur *fuses* or *melts*, but does not *burn*, at the heat of 220°, but at that heat the *fumes*, whilst it killed the insects, would be too strong for the foliage of plants. It is only necessary to have the *flue* at from 160° to 170° of warmth; this would produce a fume quite powerful enough, but would not injure the plants, unless it was some *very delicate* young foliage. To save such things, the plants might be removed, and, if they suffered from the red spider, place them where the fumes are the weakest, and the lower in the house the weaker they are. With hot-water pipes, avoid smearing over with the mixture about two yards nearest to the boiler; beyond that the pipe will scarcely ever be as high as 200°.

The red spider will generally, at periods, retire into crevices or holes in the materials of the house; it is advisable once a-year, say before housing the plants in autumn, to clear the house of all plants, close it up as much as possible, and then *fume* the house as powerfully as you please, and all the secluded insects will generally be destroyed; and attention to this will often save the plants afterwards introduced from the destructive pest.]

Motion in Plants.—Without attempting to enter on the difficult question of "spontaneous motion," or the difference between vegetable and animal life, it may be remarked that if nature had endowed us with a microscopic power of vision, and if the integuments of plants had been perfectly transparent, the vegetable kingdom would be far from presenting to us that aspect of immobility and repose which our perceptions now ascribe to it. The internal parts of the cellular structure are incessantly animated by the most various currents, ascending and descending, rotating, ramifying, and continually changing their direction; they manifest themselves by the movements of a granular mucilaginous fluid in water plants (Naiades, Characeæ, Hydrocharideæ), and in the hairs of phænogamous land plants. Such is the peculiar molecular movement discovered by the great botanist Robert Brown (which is indeed perceptible, not only in vegetables, but also in all matters reduced to an extreme state of division); such is the gyratory current (cyclose) of globules of cambium; and, lastly, such are the articulated filamentary cells which unroll themselves in the antherides of the chara, and in the reproductive organs of liverworts and algæ, and in which Meyen (too early lost to science!) believed that he recognized an analogy to the spermatozoa of the animal kingdom. If we add to these various currents and molecular agitations the phenomena of endosmose, the processes of nutrition and of growth, and internal currents of air, or gases, we shall have some idea of the powers which, almost unknown to us, are incessantly in action in the apparently still life of the vegetable kingdom.—*Humboldt's Cosmos.*

BEGONIA PRESTONIENSIS.—Messrs. Lucombe and Pince's advertisement reminds me of an opinion I was led to form on receiving from them lately fine specimens of the above-named plant, that Begonias must soon become as popular as Achimenes, Gloxinias, and the like, now that the process of hybridization has been so successfully brought to bear upon them. You will, perhaps, allow me to mention, for the information of those who have not seen it, that this B. Prestoniensis is probably the handsomest of the Begonias—certainly one of the most brilliant; so that it must become a popular plant. It is said to come from B. cinnabarina, crossed with B. nitida, and unites with foliage and flowers very much like those of the former the shrubby character of the latter, so far modified as to be literally of a neat branched habit of growth; the leaves are obliquely ovate-acuminate, slightly lobed, and doubly-serrate on the margin, and the flowers come along the branches in axillary trichotomous cymes, elevated on long red peduncles above the dark green leaves. These flowers (male four-petalled, female five-petalled) are, perhaps, rather smaller than in B. cinnabarina, but brighter coloured, and they have unquestionably a very pleasant Rose-like odour, which was discoverable after a long railway journey.—*T. Moore. Gardeners' Chronicle.*

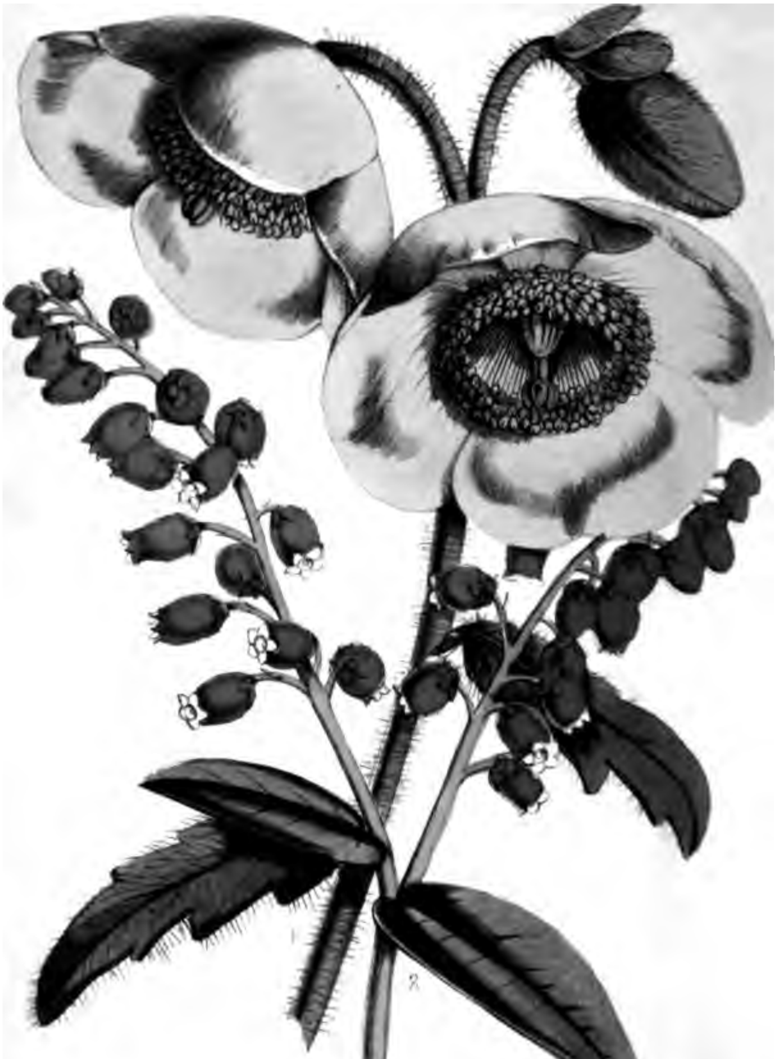
NOTES UPON THE TULIP DURING THE SEASON OF 1852.—Many excellent articles upon the Tulip have been sent us by Mr. Slater, and appeared in previous volumes of the FLORICULTURAL CABINET. The following notes he gives in the *Floricultural Review*, of which publication he is the editor. The true character of each flower, as given by Mr. Slater, may be fully relied on:—

"The Tulip season of 1852 has been far short of an average one, as the blooms have not been in that fine state which many of us have seen; and the great preponderance of flamed flowers is a sure and certain criterion by which we may found our opinions. Feathered flowers are generally more abundant after a severe winter than when it is a mild one, and this is an effect for which we cannot account. There is no florists' flower so fickle and inconstant as the Tulip, and we are much in ignorance respecting it. Nature has her gambolling as well as mankind, but she is more sportive and frolicsome; we see her at one time in all her beauty, and again in her dishabille. The novelties of the season 1852 are not numerous, and we may just take a rapid review of what has come under our notice. A Feathered Byblomen from the neighbourhood of Leigh, name not known, was shown at the Northern Counties Tulip Meeting (not for competition), raised from Roi de Siam, which far eclipses any Feathered Byblomen in cultivation. Form and base unexceptionable, the feathering dark and bold, and the white ground clear and bright. This variety is said to be equally good when flamed, and, if so, the Maid of Orleans, or rather Princess Royal, must give place to one so much her superior in every point—form and pencilling particularly. We understand the stock consists of twelve roots. In introducing this variety, we have not done it *in a whisper*, as it was openly brought forward for all to see; and no one who has any taste for a Tulip will say that we have given it more praise and commendation than it deserves. Another novelty of a feathered rose was also in the winning pan at the same meeting, called Rosy Gem; and certainly, excepting one or two faults, it is a gem of the first water. Had it been placed for competition in the class, it would have been No. 1. The cup is rather long, and the base a little better than Lady Crewe. We feel no hesitation in stating that it is a seedling from Lady Crewe. It has all the parent's characteristics about it, but is a decided improvement upon it. It is said to have been raised from seed sown by the late distinguished amateur John Thackray, Esq., of Nottingham, formerly of Manchester whose collection was disposed of a few years ago. Guido, a Feathered Byblomen was shown by Mr. Bromley in his pan, and, although very pure, it did not appear to us likely to make a first-rate variety. It has all the faults of Edgar, only being pure. Violet Amiable was also brought for inspection in a much better state than usual. This seedling was raised by the late John Haigh, of Ashton-under-Lyne, near Manchester, and was sold at his sale to one individual. The cup is rather long, and the feathering is apt to skip at the top, similar to Ambassadeur d'Holland, but the white is extremely pure as respects the ground and base. The colour of the feathering is similar to Bienfait Incomparable, only a plated feather. It took the first prize in the class at the Oldham Floral and Horticultural Meeting, and very deservedly. Dixon's Bion has become a great favourite this season, from its coming so well in either a feathered or flamed state. We saw a flamed bloom which we considered ought to have been placed first in the class, instead of Unique. His Queen Eleanor, in the feathered class, was placed before Bion, but we prefer Bion to her majesty.

"Colbert, a fine rich yellow and black feather, took a fourth prize at Birmingham, and will please the most fastidious grower. Lady Clifton (the clipper) we have not seen; it has been submitted to the opinion of the editor of the *Florist*, who reports favourably of it. We should have had a *much better* opinion of it had a bloom been brought to the National Meeting; as there have been one flamed and two feathered bulbs sold out, besides what the raiser has in his collection, surely a bloom might have been spared for inspection. If it had not been in first-rate condition, allowances might have been made; but we doubt its form being good, for two reasons. The first is, that Triomphe Royale and Queen Boadicea are both long in the cup; secondly, we have taken seed for several years from Queen Boadicea, and we cannot say we have one but what is rather too long in the cup. Even Kate Connor has only one fault, a trifle too long in the cup, yet it is much better than nine out of ten that we have in the rose class at present. Had our friends seen a feathered bloom of Kate at G. W. Hardy, Esq.'s, of Warrington, there would not have been a whisper, but a *downright shout*. We wished to have brought the bloom to Birmingham, but the gentleman alluded to said it should remain in the bed to look at as long as it would stand. We have also seen three other blooms feathered, all good, and two of them won early in the class; and one that was flamed, but cut too young; had it been a matured bloom, we believe that there is not a rose Tulip in existence that could bear a comparison with it. The scarlet feathering is much richer than Dolittle or Queen Boadicea. We must be excused if we notice two which *we* have bloomed for the first time from Rose Breeder Gibbons, crossed with Catalina, both feathered, and first-rate in form and bottom. One we have named Dinah, and the other, which for brilliancy of the white cannot be excelled, called Modestina. Unfortunately the stock is small, only a few roots, as the seed was only sown six years ago. There was one characteristic about these varieties, they were not discoloured at the base. Probably this was owing to their being covered, so as to keep the sun and evening atmosphere from them, that they might remain a long time in bloom. Adonis, a seedling of our own, from Polyphemus, crossed with San Joe, bids fair to be in the foremost ranks, being large, well feathered, perfectly pure, and steady; Roderigo, also from the same sowing, bids fair to equal Adonis."—(*To be continued.*)

PROPAGATION OF HOLLYHOCKS.—The best blooming plants are raised from cuttings, which may be taken from the crown of the old root when the shoot is about an inch long, in the month of April or May; or by single eyes from wood shoots, in July and August, taking care the bark is sufficiently hard, but not pithy, or they are likely to rot.

The cuttings should be potted singly in small thumbs; the eyes placed five or six round a small sixty-sized pot, in a light and very sandy loam, plunged in a close frame (if available), with a little bottom heat, very sparingly watered, giving air every day for a short time, to exclude damp, and carefully picking off all decayed leaves. In about three weeks they will mostly be rooted, and should be immediately potted into thumbs or small 60's; when well established, they should be hardened off, and kept in a cold airy frame until they are transferred to the open ground for blooming.—*A Practitioner.*



1. Meconopsis Wallichii
2. Andromeda neriifolia

NOVEMBER, 1852.

ILLUSTRATIONS.

1. MECONOPSIS WALLICHII. (PAPAVERACEÆ.)

THE generic name is derived from MEKON, *a poppy*, and OPSIS, *resemblance*, alluding to the appearance of the plants to the Poppy. Many of our readers know the yellow-flowered Welsh Poppy formerly called Papaver Cambrica; its name was changed to Meconopsis Cambrica, forming the first of a new genus. Of its former family much has been written, especially relative to the wild red Poppy of our corn-fields, and the common white-flowered, from which opium is extracted.

> "From the Poppy I have ta'en
> Mortal's balm, and mortal's bane!
> Juice that creeping through the heart,
> Deadens every sense of smart;
> Doom'd to heal, or doom'd to kill,
> Fraught with good, or fraught with ill."
> MRS. ROBINSON.

The Poppy, in floral language, is made the symbol of "consolation," in consequence of some of the plants affording a juice that will ease pains and procure sleep to the restless invalid.

The ancients thought the red Corn-Poppy so necessary for the prosperity of their corn, that the seeds of it were offered up in the sacred rites of Ceres, whose garland was formed with barley, or bearded-wheat, interwoven with poppies. An antique statue of this goddess, at the Louvre, at Paris, represents Ceres as holding poppies in her hand mixed with corn, as well as having them braided in the hair. And in the same collection, *Sabina* holds a cornucopia filled with pomegranates, grapes, and poppy-heads. Poppy seeds were frequently mixed in the food of the ancients, strewed over their bread, and also sent to table mixed with honey.

The Persians still continue to sprinkle the seeds of poppies on their rice and wheaten cakes, which is also practised in Germany, where the seeds are given as a cooling diet to singing birds, and in England we use them for the same purpose, known under the German name of *maw-seed.*

> " Sleep-bringing Poppy, by the plowmen late,
> Not without cause, to Ceres consecrate:
> For being *round* and *full* at his *half-birth*,
> It signified the perfect orb of earth;
> And by his inequalities, when blowne,
> The earth's low vales and higher hills were showne,
> By multitude of grains it held within
> Of men and beasts the number noted bin;
> Or cause that seede our elders used to eate,
> With honey mixt (and was their aftermeate)."

The handsome *blue-flowered Poppy* (*Meconopsis Wallichii*), which we now figure, we saw in bloom in the Royal Gardens of Kew during the past season. Dr. Hooker discovered this beautiful species in Sikkim Himalaya, and sent seeds of it to the Royal Gardens, where, in pots in a frame, the plants were from two to three feet high. The flowers are produced in a long drooping raceme. It merits a place in every flower-garden, and being a perennial herbaceous plant, it is very likely to flourish in the open border.

2. ANDROMEDA NERIIFOLIA. The *Oleander-leaved.* "Synonyme, Leucothoe Neriifolia." It is a native of Brazil, and has been obtained by Mr. Cunningham, of the Comely Bank Nursery, Edinburgh. It is a neat, bushy, shrubby plant, and flourishes admirably in the greenhouse, and certainly is entitled to a place in every one. Like all the Andromedas, it succeeds best in light peat soil, with a free drainage. If it be exposed to the powerful effect of full sun during the hottest part of summer, it will be injured thereby; therefore let it be in a shady situation during that period, either in a pit frame or greenhouse. It is easily cultivated, and merits every attention.

NOTES ON NEW OR RARE PLANTS.

BEGONIA HERNANDIÆFOLIA.—Mr. Seeman sent seeds of it from Veraguas to the Royal Gardens of Kew, where, in the stove, it is now blooming. It is a stemless plant, and from the top of the root the leaves push forth, the stalk of each being about four inches long, and the thick leathery leaves are of a *deep blood* colour underneath, green above, with one light spot upon it. The flower stems are from four to six inches high, each bearing a spreading, drooping, corymbous head of blossoms, of a *deep rose-red* colour. It is, indeed, a lovely species, and blooms throughout the summer and autumn; and no doubt, by suitable treatment, it would bloom through the winter and spring also. (Figured in *Bot. Mag.*, 4676.)

BEGONIA PRESTONIENSIS.—This very handsome blooming plant is a hybrid, raised in the garden of E. L. Betts, Esq., of Preston-hall, in Kent. The gardener, Mr. Frost, states that it was obtained by crossing B. cinnabarina with B. nitida, which *latter* has imparted to it a *shrubby* and *free blooming* habit. It is the handsomest Begonia in this country.

The flowers are borne in profusion, of a brilliant orange-scarlet, and sweet scented. Each blossom is an inch and a half across. Messrs. Lucombe, Pince, and Co., of Exeter, have the stock of this very charming plant. They state it flourishes in the *Greenhouse*, and the flowers are as fragrant as a tea-scented Rose. It merits a place in every greenhouse, and, we may add, in every sitting-room window of good aspect also. (Figured in *Mag. of Bot.*)

CENTROSOLENIA BRACTESCENS (Natural order Gesneraceæ).—A stove plant, growing two feet high, in the Royal Gardens of Kew, and blooms freely throughout the summer. Each blossom is large, white, tube-shaped, spreading wider upwards. The Calyx is a little shorter than the Corolla, of a red-purple above and white below. A handsome stove plant. (Figured in *Bot. Mag.*, 4675.)

LÆLIA PURPURATA (Orchideæ).—Messrs. Backhouse, nurserymen, of York, obtained this very strikingly handsome flowery species from St. Catherine's, in Brazil. Each blossom is *six* inches across. Sepals and petals pure white, the latter being very broad. The lip is three inches long, and rolled round the column, so as to form a tube, which spreads two inches wide at its terminating (front) limb. The lip is yellow in the middle, streaked with crimson, but the limb is of the deepest and richest purple. It merits a place in every collection of Stove Orchideæ. (Figured in *Paxton's Flower Garden*, 96.)

LILIUM GIGANTEUM.—Sir W. J. Hooker states, "The discovery of this 'Prince of Lilies' we owe, as we do so much of Indian, and especially northern Indian botanical novelty, to Dr. Wallich, who detected it in moist shady places on Sheopore, in Nepal." "This majestic Lily," writes Dr. Wallich, "grows sometimes to a size which is quite astonishing;" the stem measuring ten feet from the base to the top. The flowers are large and delightfully fragrant, not unlike those of the common white Lily of our gardens. Messrs. Cunningham, of the Comely Bank Nursery, Edinburgh, have had a specimen in bloom this year, the first bloomed in Europe, which had attained the height of ten feet, and the top portion of it, being the flower one, occupied twenty inches. Such a raceme of flowers, accompanied by leaves ten to twelve inches long and eight broad, must have afforded a striking object. The stem is straight, ten feet high, and five and a half in circumference at the base. Flowers white, with purple tinge inside, and purple sheaths, greenish below, funnel-bell shaped; twelve of these blossoms were in the raceme, each flower being about six inches long and nearly five across the mouth. The flowers incline with the mouth somewhat downwards. Major Madden sent seeds of it five or six years ago to Messrs. Cunningham, and the bulbs are treated in the ordinary way, without heat. Major Madden says, "The Lilium Giganteum is common in the damp thick forests of the Himalaya mountains, the provinces of Kamaon, Gurwhal, and Buschar, in all of which he has frequently met with it. It grows in rich black mould, the bulb close to the surface, at from 7,500 to 9,000 feet above the level of the sea, where it is covered with snow from November to April, or thereabouts. The hollow stems are commonly from six to nine feet high, and are used for musical pipes. The fruit ripens in November and December."

This truly magnificent Lily deserves a place in every garden, and no doubt will soon be spread throughout our own country. Plants are already in the principal nurseries. (Figured in *Bot. Mag.*, 4673.)

Tacsonia Sanguinea (*Blood-coloured*).—Mr. Low, of Clapton Nursery, received seeds of this pretty species from Trinidad, under the appropriate name of Passiflora Diversifolia. It is a free bloomer, and Mr. Low states it will make a first-rate conservatory plant. It does not require much heat, and is easy of cultivation. The flowers are of a greenish-red outside, and a fine rosy-red inside. Each blossom is upwards of five inches across. It is a fine climber, highly deserving of a place in the greenhouse or conservatory. (Figured in *Bot. Mag.*, 4674.)

Veronica Formosa.—The Beautiful Speedwell. It is a compact, evergreen, dwarfish, bushy shrub, with leaves very similar to the Evergreen-box. The flowers are of a clear bright blue, and are produced in little corymbs at the ends of the shoots. They are about the size of the common English Veronica Chamœdrys. It is a very neat shrubby plant, and has stood outdoors uninjured at Abbotsbury, in Dorsetshire, where it blooms in summer, and is very beautiful. It is a native of Van Diemen's Land, growing on Mount Wellington. It is usually considered a greenhouse plant. (Figured in *Paxton's Flower Garden*, 95.)

Clematis Lanigunosa. The *Woolly*.—Mr. Fortune sent this magnificent flowering plant from China to Messrs. Standish and Noble, of Bagshot. It has some resemblance to Clematis Azurea Grandiflora, but the leaves are *leathery*, not *thin*, and the flowers are much larger. Each blossom is about six inches across, and the petals are very broad, each more than two inches. They are of a pretty blue colour, with red filaments at the middle. It is as hardy, or more so, than C. Azurea Grandiflora; indeed, it is said to be quite hardy. It will prove to be, either in the greenhouse or outdoors, one of the finest climbers that our gardens possess. (Figured in *Paxton's Flower Garden*, 94.)

Loaza Bicolor.—It is an annual, brought from Central America by M. Warezewitz. The flowers are white, with a crown of scarlet scales, very pretty.

Grindelia Speciosa (N. O. Compositæ).—A hardy undershrub from Patagonia, in South America. Seeds of it were obtained by Henry Wooller, Esq., of Tulse-hill, London, and in his grounds it has formed a bushy plant two feet high, having from thirty to forty flower heads open upon it at the same time. These heads are covered to a considerable thickness with a transparent glutinous varnish, by which this species is at once known. The flowers are yellow, something like a smallish semi-double perennial sunflower, each being nearly three inches across. It is very ornamental, and merits a place in every suitable bed or border.

Maharanga Emodi (Syn. Onosma Emodi), belonging to the Borageworts. It is a hardy perennial from Nepal. The name *Maharanga* is that employed by the Nepaulese, among whom the great carrot-like root of the plant is used in producing a blue dye; the name is said to signify "a strong or intense colour." The leaves are similar to some of the Echiums, Borage, &c., rough, hairy. The flowers are produced in racemes, gradually expanding from the bottom upwards, and each raceme having from twelve to twenty blossoms. Each blossom is about a third of an inch across, of a pale rose, tinged with blue towards the end. It has bloomed in the Botanic Garden, Glasnevin, Dublin.

LANDSBERGIA CARACASANA.—A tuberous-rooted stove plant, belonging to the Irids (Iris, &c.). It is a native of the Caraccas, and has been introduced to the Botanic Garden at Leyden. The stems grow to about two feet high, having terminal spathes of from ten to a dozen or more flowers. Each blossom is nearly two inches across, of a golden yellow, spotted with black. It is said to flower all the year round. Professor de Vreise describes it as having the habit of a Marica or a Moræa. Curious and beautiful.

ASTER AMELLUS GRANDIFLORUS.—This is a very pretty Michaelmas Daisy, growing half a yard high, bearing fine heads of lavender-lilac flowers, which, in contrast with the yellow centre, is very pretty. Each blossom is nearly two inches across. It deserves a place in every garden.

ASTER FORMOSUS.—It is a very neat-growing bushy plant, three feet high, and a most *profuse* bloomer. The sides of the plant are adorned from near the ground to the crown with its beautiful flowers. Each blossom is an inch across, of a peculiarly pretty rosy-lilac, with a striking yellow centre. It merits a place in every garden.

OXALIS CUPREA.—The foliage of this very pretty plant only rises to two or three inches high, but forms a lovely green carpet. The flowers are of a pretty yellow, slightly tinged with coppery colour. They just rise above the green mass of leaves, and shine with a beautiful striking contrast; and being now (October 18th) in profuse bloom, renders it more valuable. It ought to be grown in every flower bed.

COREOPSIS AURICULATA.—A hardy perennial, growing two feet high, and blooms freely at this late period. The blossoms are of a bright yellow, an inch and a half across.

COREOPSIS GRANDIFLORA.—Grows three feet high, and blooms very freely thus late. The flowers two inches across, of a bright golden-yellow.

TRADESCANTIA VIOLACEA.—A hardy perennial, growing half a yard high, and blooms very freely. The flowers are about the size of the common Tradescantia Virginica, the spider-wort of our gardens, but are borne in larger trusses, and of a beautiful violet colour. It is now exceedingly pretty.

VERONICA AMÆTHYSTEA.—A hardy perennial, growing from six inches to a foot high, and now in beautiful bloom; its numerous spikes of fine blue flowers render it very pretty.

ERODIUM MANASCADENIA.—This is a hardy perennial, growing about half a yard high, each blossom being two inches across, of a bright purple, with a light centre, and in form somewhat similar to the old dwarf-spreading Geranium Nodosum of our gardens. It is neat and pretty.

CROWEA STRICTA.—This is a very neat dwarf-growing, *free-bloom-*

ing, greenhouse plant. When but a foot high, and formed into nice bushy plants, they bear a profusion of flowers, of a rosy-pink colour, and each blossom an inch and a half across.

Crowea Latifolia.—This is even a neater bushy plant than C. stricta, and blooms equally profuse. The leaves are broad, and the blossoms as large as C. stricta, and of a deep rose colour. Both species deserve a place in every greenhouse, blooming not only in autumn and winter, but nearly all the year.

Alstromœria Ovata.—This is a fine autumn blooming plant, and the profusion of its orange flowers, spotted with dark, are beautiful and ornamental. It is now in fine bloom in the open ground.

Grammanthus Chloræflora.—We have seen a considerable number of patches of this very pretty dwarf-spreading plant in bloom during the past summer: it was exceedingly beautiful, and bloomed in profusion. The soil was peat and loam in equal parts. It makes a neat plant for edging a vase, or for a bed of low-growing plants. Pots of it on the greenhouse-shelf succeed well.

Pentstemon Atro-cœruleus.—A very handsome hybrid, which was raised from seed saved from the *true* P. gentianoides. The blossoms are very long, of a fine blue, streaked with deeper colour.

Pontstemon Grandis.—Another hybrid, obtained from the same batch of seed as the above, and the blossoms are even larger; they are of a lilac-violet deep blue, striped with white and carmine. Both were raised on the continent, and merit a place in every garden.

Dodecatheon Media Alba Compacta.—A very pretty dwarf-growing variety; the flower-stem being six inches high, and bears an enormous head of flowers, white, with a yellow centre.

Crocus Speciosus.—This is a very charming autumn bloomer; the flowers are large, of a rich blue, slightly striped. It is a valuable companion to the Colchicums.

Amaryllas (or Sternbergia) lutea is also a very pretty autumn bloomer; the flowers rise from four to six inches high, of a bright yellow, and contrast charmingly with the above. Every flower-garden, especially near a dwelling-house, should have these three families of plants therein. They are to be had very cheap of most of the seedsmen.

TREATMENT OF THE HYACINTH IN GLASSES.

BY MR. WILLIAM HAMILTON, SEEDSMAN, 156, CHEAPSIDE, LONDON.

The following cursory remarks may not prove altogether unacceptable to some of your readers at the present time, when many who wish their parlours to look gay with that most beautiful of all early spring flowers, "the Hyacinth," are purchasing, or are about to purchase, their supply of roots and glasses.

I have had many years' experience in the culture of the Hyacinth in its simplest form, viz., in water-glasses; and every year brings me more and more to the conclusion that the long glasses, with broad bottom and contracted neck, most generally in use, though the best that can be had for the purpose, are but very imperfectly adapted for what is wanted.

The Hyacinth, when put into these glasses, have always a tendency to get mouldy, which, if not looked after, ultimately leads to the total decay of the bulb; and the cause of which mould appears to me to be the depth of the mouth made to them; for, by the bulb being "swallowed" by these "voracious" mouths, the air is prevented circulating round it, and the evaporation from the water takes hold upon it, and so congregates, that unless promptly attended to, the devouring propensities of this mould soon makes inroad upon the bulb, and creates a filthy smell from decay; the result of which is, a glass, instead of being occupied by a sound and healthy root, is filled by one that had much better be on the dunghill than in a sitting-room, even if all the sweet waters of Cologne were playing from a fountain in every corner. Those who delight, therefore, in having this beautiful and simply cultivated flower in their sitting-rooms should, when purchasing their glasses, look to the shallow-mouthed ones; and as an illustration of the utility of this I may mention, that for four years I have grown a Hyacinth in a peculiarly shaped pickle-bottle, the mouth of which is only large enough to admit of the base, and not one whit more; the whole of the bulb is consequently left freely exposed to the air, and I have yet failed in ever discovering a vestige of mould, but, on the contrary, have always found it to be perfectly dry; and "Grootevat" being the root, I have been compelled to honour with this throne, from its base being small and better adapted than any other for my "peculiar friend," the bottle, it has always been the acme of perfection.

To be very successful, then, with the Hyacinth when grown in water, *deep-mouthed* glasses should be avoided.

It may be argued by some, that large as the mouths are of the glasses as at present made, they are not size enough for some of the largest roots; true, but I am of opinion that the glasses, take them all in all, are as little adapted for the purpose as an egg-cup would be to grow an acorn. The eye has become accustomed to them, and from long use, and the want of anything better, they are patronised; but however large the mouth is wanted for bulky bulbs, surely it is in width and not in depth.

I have devised a form of glass which, if I am spared, will be issued into the floricultural world next season; and if not more elegant, I have an idea it will be much more suitable. The present glass is made from an absurd notion that the fibres of the Hyacinth bulb grow perpendicular; whereas if one is planted in earth, and lifted after it has begun to shoot, the fibres will be found spreading in all directions; why therefore should they be contracted when put into glasses, and not allowed their natural course?

Having made these remarks upon the Hyacinth glass, a few more upon the Hyacinth *supporter* may not be ill-timed. It is now four years since I introduced the supporter to the public; I was led to do so from having long found a want of some support to this fine flower, as frequently I have seen some of my best blooms snap right through the stem from their own weight, and in other cases from their long and weak stems; to guard against this I invented the supporter, and thought it an acquisition, as it answered, and does now answer, the purpose in this respect; but unfortunately, like their neighbours the glasses, they have a great fault, which I am bound to admit, after severe practical experience. The supporters, when put into the glasses, so affect the water that a filthy slimy substance is formed, which envelopes the bulb as a spider does a fly in its web, precluding the freedom of growth, and deteriorating the bulb to such an extent, that anything but an average bloom may be expected.

The supporters, then, like the deep-mouthed glasses, should, if possible, be avoided, unless they are obtained lackered, in which case they answer the purpose for which they were intended, and save many a fine spike from premature destruction, as they do not affect the water when they have undergone this process, at least as far as I have been able to discover; but this season will give me ample testimony.*

Having generally been very successful with Hyacinths, Narcissus, &c., in glasses, I have wondered why they are not more grown in this way, as by simply keeping the glasses filled with water to the base only of the bulb, and guarding as much as possible against the evils attending deep-mouthed glasses and unlackered supporters, they will usually yield flowers which will amply repay any trouble, and afford much pleasure to those who, being fond of flowers, yet have no conveniences to grow them in any other way.

TREE CARNATIONS.

BY MR. JOHN BURLEY, FOREMAN AT THE WELLINGTON NURSERY, ST. JOHN'S-WOOD-ROAD, LONDON.

This being the season when these most charming plants bloom in their beauty, either grown in pots in the greenhouse, or for ornamenting the conservatory during the usually dull months of autumn and winter, also when trained against a good-aspected wall out-doors, where they blossom in profusion, as is the case even now, many of the plants having dozens of their strikingly-handsome, sweet-scented flowers, I am, in consequence, induced to bring this valuable class of flowers more particularly before the readers of this Magazine, and from a vast number of varieties, have taken notes of the very best, and which I trust may be a guide to those individuals who are desirous of possessing some of the best, of *recent* origin.

Alpha is a fine, large, dark crimson self; a free bloomer, and highly perfumed; new.

Phœbus is quite a novelty in Tree Carnations. It is a bright yellow, striped with bright cherry colour; a free bloomer, and a large close flower; new.

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* I may here mention that all who have kindly patronised me for the supporters, may get them exchanged for lackered ones; those for pots do not require this process, as I have not yet detected any evil tendency from them when in earth.

Beaute Parfait, a large flower, of a bright scarlet colour, flaked with white; very sweet; new.

Bichou, a very attractive and beautiful variety, the colours being pink, white, and crimson, having a very large, close pod; highly fragrant and very distinct; new.

Blanc Virginale, a fine bright scarlet self, having a fine close truss; new.

Grand Sultan, a pure white, which is highly perfumed. The pod is close, and habit of the plant very good.

Jusques d'Aragon, a large, dark crimson self, quite as richly perfumed as the old crimson-red clove.

Valentine, quite a novelty in colour, being a chocolate striped with crimson; very pretty and very sweet.

Adonis is certainly one of the very best; the colour is a bright scarlet, striped with dark crimson; pod, close and compact; habit, excellent.

La Rosiere, a very fine rose-flake; very sweet scented.

Manteau d'Eveque, a very nice variety, of a good purple colour. Habit good, and very sweet.

Madame La Costa is a very fine large flower, a bright cherry colour, and having a very rich clove perfume.

The above twelve fine varieties are the best in cultivation, all quite new, but merit a place wherever they can be grown.

The following twelve are the best of the older varieties; they are very handsome, but may be procured at a proportionate less price.

Atilla, a scarlet and white flake; a very free bloomer, and sweet scented.

Belle Zora, a beautiful salmon-pink, with crimson stripes and blotches; very sweet and of good habit.

Cassandra, a good, bright cherry colour; very sweet, and good habit.

Forge de Vulcaine, this is one of the brightest scarlet selfs grown, and there ought to be one in every collection.

Isis, a pure white, beautifully mottled with salmon colour; pod good, and perfume very rich.

Titus, fine bright crimson self, of dwarf habit, and a free bloomer; good pod, and very sweet.

Madonna, blush, striped and spotted with crimson.

La Serme, pretty blush-white, beautifully mottled with rose, and very sweet; habit good.

Mount St. Bernard, a splendid variety. It is a scarlet and maroon flake; habit good, and truss fine.

Nonpareil, a beautiful blush-white, the best of its colour.

Punctata, a bright rose and carmine dappled.

Union, a beautiful crimson distinctly mottled with white; one of the best older varieties.

The last twelve should be procured by those persons desirous of having a collection of those beautiful flowering plants; being older, larger plants can be had than of the recent raised ones, and may be had at most of the general Nurseries. They will amply repay with their beauty and fragrance for the little attention required in cultivation. They flourish in a strong loam and well-rotted manure, with a liberal drainage, in the same as the Florist Exhibited Carnations, but the Tree Carnations are much more readily grown and perpetuated.

Cuttings strike freely, in pots, in a light sandy loam, under a hand-glass, or a small one-light box, and when rooted must be potted in small pots, and be kept close for a few days, after which they should have all the air they can, and they will grow rapidly and soon be in flower.

MISCELLANEOUS SECTION.

GARDEN ANTIQUITIES.—No. 1.

Abstract of a letter from the worshipful John Evelyn, Esq., F.R.S., concerning the damage done to his garden by the severe winter of 1683. Read before the Royal Society. (*Trans.*, 1684, p. 559.)

"As to timber trees, I have not many here of any considerable age or stature, except a few elms (which having been decayed many years), one cannot well find to have received any fresh wounds distinguishable from old cracks and hollownesses; and, indeed, I am told by divers that elms have not suffered as the great oaks have done; nor do I find any of twenty-five or thirty years' standing that have been touched. The same I observe of limes, walnuts, ash, beech, hornbeams, birch, chesnuts, and other foresters; but, as I said, mine are young comparatively. The rifting has occurred chiefly among the overgrown trees, especially oaks. As for exotics, I fear my cork trees will hardly recover, but the spring is so very backward (even in this warm and dry spot of mine), that I cannot pronounce anything positively, especially of such whose bark is very thick and rugged, such as the cork, enzina, and divers of the resinous trees. The Constantinopolitan, or horse-chesnut, is turgid with buds, and ready to expand its leaf. My cedars, I think, are lost; the ilex and scarlet oak not so; the arbutus doubtful, and so are bays; but some will escape, and most of them repullulate and spring afresh if cut down near the earth at the latter end of the month; the Scotch fir, spruce, and white Spanish (which last used to suffer in tender buds in spring frosts) have received no damage this winter. I cannot say the same of the pine, which bears the greater cone, but other Norways and pinasters are fresh; laurel is only discoloured, and some of the woody branches mortified. Among our shrubs, rosemary is entirely lost, and to my great sorrow, because I had not only beautiful hedges of it, but sufficient to afford use for the making a very considerable quantity of the Queen of Hungary's celebrated scent water; so universal I fear is the destruction of this excellent plant, not only in England, but over our neighbouring countries to the southward, that we must raise our next hopes from the seed. Halimus, or sea purslain, of which I had a pretty hedge, is also perished, and so another of French furzes; the cypress are all of them scorched, and some to death, especially such as were kept shorn in pyramids; but amongst great numbers, there will divers escape. The berry bearing savine has not suffered in the least; it perfectly resembles the cypress, and grows very tall and thick. I think the arborthuja is alive, and so is the American acacia, acanthus, paliurus, pomegranad; my laurustinus looks suspiciously; some large and old alaturnuses are killed. The phillyreas angusti and serralifolias (both of them incomparably the best for ornamental hedges of any of the perennial greens I know) have hardly been sensible of the least impression, more than tarnishing their leaves; no more have the Spanish jasmines and Persian. As for the choicer kinds that are set in for hyemation, they certainly escape according as they are treated, or the commodiousness of the conservatory; but to say what may be added on this subject would require a chapter. I would in the mean time advise such as have suffered in their greenhouses not to despair when they see leaves of their myrtles, oranges, oleanders, jasmines, and other precious shrubs, russet or fallen, but to cut them to the quick, plaster the wounds, and plunge their cases or pots, trimmed with fresh mould, in a warm bed. But, above all, not to expose them till these eastern winds be qualified, nor until we see the wise mulberry put forth, which is certainly a most faithful monitor; nor should we in any wise cut or transplant any of the perennials until they of themselves begin to sprout. I need say nothing of the holly, box, yew, juniper, &c., and yet, to my grief, I find a holly standard of near 100 years old, drooping and of doubtful aspect, and a very beautiful hedge, though much younger, being clipped about Michaelmas, is mortified near a foot beneath the top, and in some places to the very ground. So as there is nothing seems proof against such a winter that is late cut and exposed. Among the fruit trees and murals, none seem to have suffered save figs, but they being cut down, will sprout again at the root. The vines have escaped, and of the esculent plants and salads most, except artichokes, which are universally lost; and (what I prefer before any salad whatever, eaten raw when young) my sampier is all rotted to the very root; how to repair my loss I know not, for I could never make any of the seed which came from rock-sampier (my kind) to grow. The arborescent and other sedums, aloes, &c., though housed, perished with me; but the yucca and opuntia escaped. Tulips, many are lost; and so the Constantinople Narcissus, and such tuberosæ, as were not kept in the chimney corner where was a continual fire. Some anemonies appear, and I believe many are rotted; but I have made no great search in the flower parterre. My tortoise (which by his constant burying himself in earth on the approach of winter, I look upon as a kind of plant-animal) happening to be obstructed by a vine root from mining to the depth he was usually wont to inter, is found stark dead, after having many years escaped the severe winter. Of fish I have lost very few; and the nightingales are as brisk and frolic as ever.

"Say's-court, Deptford, April 14, 1684."

Cape Orchids.—The terrestrial Orchids deserve more than a passing remark: they are numerous and very beautiful; in my opinion there are many here but little inferior to the most showy of the epiphytous kinds. I shall take care to forward a good parcel of roots, and then perhaps cultivators may have an opportunity of judging for themselves. In the meantime a description, however faint, may induce some to give them the attention they so well merit. Fancy, then, a plant with the general characteristics of an Ophrys, producing a spike of flowers as large and as thickly set as those of Saccolabium guttatum; often, indeed, measuring 2 feet in length, of a bright salmon-colour intermixed with as bright a yellow. Another with plaited foliage and a nodding head of some twenty bright yellow blossoms, having a deep stain of crimson on the cucullate lip, in the manner and of the size of Dendrobium. Again; a species with fleshy persistent leaves and an erect stem of about 2 feet, supporting from fifteen to thirty large yellow flowers, the lip blotched and lined with pale purple, bearing the aspect of some robust Epidendrum; and others whose white and pink blossoms at a little distance are easily mistaken for Hyacinths. Mingled with these is often found a plant not less curious or beautiful, which I imagine to be an Orobanche (Harveya capensis, Hook. Ic. Plant. t. 118): its habits agree exactly with that parasite; it produces a flower stem of about a foot in length, bearing five or six very large pure white flowers, averaging about 3 inches in diameter; it is usually found adhering to a thistle. With regard to the culture of African terrestrial Orchids, I would observe that the soil I fancy the nighest approach to their native medium will be found in the black alluvial mould of marshes or water-meadows, tempered with pure sand, which enters largely into the composition of all the soils here, where we have nothing like the peat-soil of England, nor is there much decaying vegetable matter present where these Orchids are usually found. All those from the coast are subject to a long period of drought; and unless specially marked as the inhabitants of swamps, this fact will have to be borne in mind. The dry season commonly extends from April to October, and for two months towards the end of this period they may be said to be perfectly dry, and being in most cases but just beneath the surface would be subject to extreme aridity, were it not for the shelter afforded by the thick vegetation of herbs and grasses by which they are surrounded. In October the rains begin at first but sparingly; dews, however, are frequent and heavy, and in November and December the ground becomes saturated; January and part of February dry weather usually prevails, to be succeeded by even more rain than before. Most of the terrestrial Orchids bloom at the beginning of each of these rainy periods, and by the end of May the leaves of such as are deciduous wither and die off. The mean temperature need not be high for them, as I frequently find the coast plants running back to an elevation of 2,000 or even 3,000 feet, and at this height sharp frosts are very common in our winter season. I fancy that greenhouse treatment, with the help of a close frame at the commencement of their growth, will prove all that is needed, and to keep them rather less dry than is usual with bulbs, during the torpid season.—*Plant's Excursion in the Zulu Country, in Hooker's Journal of Botany.*

CULTIVATION OF THE RANUNCULUS.—This most lovely race of flowers deserves every attention, and a collection ought to be grown in every garden where circumstances admit. Mr. William Willison, nurseryman, of Whitby, has given the following particulars in the *Midland*

Florist of a *most successful* method of growing these beautiful flowers. The following we extract from the excellent remarks he has made:—

"Last autumn, writing to my friend, Mr. Lightbody, on business matters, he offered me some of his fine ranunculuses. I said to him that myself, with many other persons, had given them up entirely, it being so difficult to get a fine bloom. In his reply, he said that he would make it a very easy thing, if I would attend to the following directions, which were very simple and very kindly given. Those directions being quite free from any perplexing nostrums, I at once agreed that he should send me a few of the very best he had. Those I soon received, forty in number, which, according to his catalogue price, amounted to nearly eight pounds.

"But what were the accompanying directions? As near as I can recollect, they were these:—'The ranunculus must have something to live upon. In the autumn, I throw out a trench, from one foot to eighteen inches, according to the depth of the soil, putting at the bottom some well-rotted cow-dung or old hot-bed manure, filling it up again with the same soil. In the month of February, rake it very fine, plant exactly an inch and a half deep, destroy all weeds and vermin, press the soil firmly about the necks of the plants, and I have no doubt you will have what will gratify you. One of the most important things to be attended to is not to let the roots remain in the ground after the foliage has changed in colour. If you want any other information, I shall be most happy to give you it.' Being then in possession of those valuables, I thought I must once more try my skill: I therefore made choice of a bed two yards from a south wall, throwing out the soil as directed, and collecting a few baskets of well-seasoned dung from a cow pasture, I put it at the bottom, sixteen or eighteen inches below the surface, covering it up with the soil thrown out. In the month of February, I made the surface fine and even, by raking the soil; I then drew off the soil to the depth of an inch and a half or two inches, marking the place where each root should be planted by putting down a small pinch of silver sand, in which I inserted each root; and now, in order to carry out the directions given me, and that I might not cover them over much, or too little, I stuck in a few pegs, leaving just two inches out of the ground, so that I might cover them very exactly, and when the soil had settled, they would be just an inch and a half deep.

"Thinking that Ranunculuses often suffered from droughty weather, I tried to obviate this by setting up a thin screen of branches, six or eight feet high, on the south side of the bed, partially to break the rays of the sun, but not altogether to exclude them. This done, they lay still for some weeks, when all came up except No. 1, which, like the bubbles on the river after which it is named, had glided for ever out of being. The weather now being dry, I occasionally sprinkled them over with water; and being fairly up, in order to compress the soil around the necks of the plants, I carefully walked through and through. Under this treatment, they grew most luxuriantly, raising my expectations every time I inspected them, especially as all who saw them declared they never beheld such plants. At length they nearly all came into bloom; but now comes my task of giving a correct description of their beauty and growth.

"Mr. and Mrs. Archibald Johnson were amongst the giants of the bed, most beautifully formed and sweetly marked, Archibald looking over the head of his fair lady full four inches, she having raised her lovely face no less than seventeen inches high. Those are gems of the first water. Near by, were the lovely Jenny Deans and Nydia, with delicate red edging, on pale yellow ground, rising to the height of seventeen or eighteen inches. Roxalana, quite as stately, very large and showy, but not quite so chaste as those above. Petrel, seventeen inches high, certainly more like an eagle, with gold-tipped wings, rising to meet the sun, than a bird of storm, was brilliant yellow, tipped with red, of the finest form. Felican, rising to the same height, exquisite in form, with a clear rose edge, on white ground. Phroine, William Bradshaw, Aboukir, Zebina, Cyra, Prince of Wales, and Commodore Napier, with Thomas Hood, and Little Nell, all attained to fifteen inches, and formed an assemblage of beauty rarely equalled. Liffey, Sultana, Delphos, Ashwelthorpe, Baritola, and Hon. Robert Wilson, fell an inch lower than the above group; still they were equally beautiful. Philomel, Charybdis, and Claudiana, beautiful, especially the last, were thirteen inches. Emily, Dr. Horner, and the lovely Anne Hathaway, were one foot. And now, to end this long, and, I am afraid, tedious description, I shall just notice the lowest, rising only to eight inches here: Mackenzie, the author of 'The Man of Feeling,' seems to stoop to those chaste, lofty, and beautiful personages around him, to adore and admire. I may just add, that although the flowers were not very much larger than usual, there were those amongst them of the finest form and colour, from two to three inches over, while some had stems a quarter of an inch, or more, thick."

ON THE DISTRIBUTION OF THE MARINE ALGÆ ON THE BRITISH AND IRISH COASTS, WITH REFERENCE TO THE (PROBABLE) INFLUENCE OF THE GULF STREAM, BY PROFESSOR DICKIE.—There were, he said, forms of marine Algæ generally admitted to be characteristic of our northern coasts, and others of the southern. The remarks he was about to make referred to those generally deemed of southern type; that is, those which usually are more or less abundant in low latitudes, and, on the other hand, are absent from high latitudes. Such species, natives of our coasts, may be classed under three heads: first, those confined to the southern parts of Great Britain and Ireland; second, species of more extensive range, since they extend to the north of Ireland and south-west of Scotland; third, those found abundantly in the south of England, and ranging along the western coasts of both islands, as far as Orkney and Shetland; and the species enumerated under these three classes, and amounting to more than twenty, are, so far as we can ascertain up to the present time, absent from a certain part of the east coast of Scotland. A considerable proportion of them re-appear in Shetland and Orkney. The marine vegetation in these northern islands resembles that of the north of Ireland, though there is a difference between them of from four to five degrees of latitude. The marine plants of some of the north-eastern counties of Scotland, intermediate in latitude, are of more boreal character. The drifting of tropical fruits, &c., to the western and northern parts of Ireland and Britain, is a proof of the direction and presence of the gulf stream; the development of southern forms of Algæ, at the extreme northern parts, is a proof of the same, and, moreover, seems an indication of its influence in reference to temperature. Are we to consider their absence from certain parts of the east coast of North Britain as owing to a lower sea temperature than in localities where they exist? The portion of the coast in question is precisely that which, from the generally understood course of the gulf stream, may be least exposed to its influence. Investigations respecting the temperature of our seas are, however, still desiderata; and without such, an important modifying element has been overlooked, having reference to the climate of the British islands. Professor E. Forbes said that the distribution of marine animals corresponded with those of marine plants. The same anomalies which Dr. Dickie has pointed out with regard to plants existed with regard to animals. Less attention had been given to the distribution of marine Algæ than almost any other organic existences. With the exception of the labours of Dr. Harvey, little or nothing has been done. We wanted a more accurate knowledge of the temperature of the ocean at different depths.

> " Call us not weeds—we are flowers of the sea;
> For lovely and bright, and gay tinted are we;
> Our blush is as deep as the rose of thy bowers,
> Then call us not weeds, we are ocean's gay flowers.
>
> " Not nursed like plants of a summer parterre,
> Where gales are but sighs of an evening air;
> Our exquisite, fragile, and delicate forms
> Are nursed by the ocean, and rock'd by its storms."
>
> (*Anon.*)

TREATMENT OF RONDELETIA SPECIOSA MAJOR.—This is one of the most lovely flowering stove plants. Its large trusses of brilliant orange-scarlet blossoms are exceedingly handsome and highly ornamental. When properly grown, each blossom is nearly the size of a sixpence. The plant naturally grows somewhat thin of shoots, and straggling, but, by due attention in often stopping the leads, the plant can be easily formed into a *pretty bush*, and such stopping tends to a proportionate increase of its terminal heads of showy flowers. And by having a few plants, stopping the leads, repolling, &c., at sundry times, such a succession may be had to supply bloom all the year. Where there is not a stove, it may be forwarded in a *warm pit frame*, and when its blooming heads first appear the plant may be put in the greenhouse to flower. The plant, *when growing*, must have a moist temperature by syringing, pouring water on flues or pipes, &c., of seventy degrees; when in bloom, a lower heat, and not any water upon the flowers, but sprinkle the leaves often, dust the under side with sulphur occasionally, to prevent red spider attacks.

When the plant has done blooming, it requires a drier atmosphere, and the soil to be kept barely moist, so that it may have a period of rest, after which repot, place in a higher and *moist* atmosphere, &c.

It flourishes in equal parts of good prepared turfy loam, peat, and *well-rotted* dung, with bits of charcoal sprinkled amongst. It merits a place in every stove or warm greenhouse. It may be had, too, at a trifling cost.

FORCING THE LILY OF THE VALLEY.—In a recent Number instructions on this subject are given by "A London Practical Gardener." The following mode of treatment is by a clever country gardener in Cheshire, who has been eminently successful in forcing it. His method of treatment is given in the "Garden Companion," and he observes:

"It requires two years to prepare the Lily for forcing, in order to have it in the highest degree of perfection. Now, it is well in Lily forcing to have *two sets of plants*, the one in the open ground, the other in pots from the commencement. The latter is by far the best for *early forcing;* the former will produce more exuberant blooms at a later period; the pots producing from the end of November until the end of January; those potted from the soil, from that period until Lilies blossom outdoors.

"Large pots are necessary; and those who intend to procure a long succession for the drawing-room, will do well to get some shallow pans made for the purpose. Such should be about nine inches diameter, by about seven inches in depth, and would, as I think, look respectable if painted a deep straw colour, and sanded over with large and sparkling grit whilst wet.

"New plantations may be made any time from November to March. They love a sound and rich soil, which retains moisture in a *steady way*, but not in *excess*. For pots, one-half strong loam, and the other half composed of very old cow manure and leaf soil, thoroughly decomposed, grows them in the highest perfection. In making new plantations, the ground may be marked out into beds, and my practice is to plant them in circles of about eight inches diameter; the circles, fifteen inches apart, are filled with young plants. When planted, I cover the whole surface three inches with very rotten manure, as a mulching, and this proves of immense benefit.

"Of course, the planting in pots is conducted in a similar way; but the latter should be *plunged* during the whole of their culture. The Lily loves a partial shade. I grow them on a wall border, on the *north side*, where, although they get a liberal amount of solar light, the soil, from its northern inclination, is kept comparatively cool through the summer. The summer's culture consists in keeping them free of weeds, and in liberal watering, and all blossom buds should be pinched off the newly-planted stock the moment they appear; indeed, by taking them away the second spring, a much superior "crown" is obtained.

"And now as to forcing: bottom heat is essential. In common with other herbaceous things, which store up in their roots the material by which the buds are developed, the root must be *forced into action first*. About sixty to seventy degrees is the bottom warmth most congenial to them. A plunging medium will be found the best—any fermenting material will do. Like the germination of seeds, some degree of *darkness* is of material benefit. Any structure which will give the above bottom warmth, with, at the same time, a much moderated top heat, of say fifty-five, is the place for them ; and in this respect they class very well with the forcing of Dutch bulbs, their treatment for a while being nearly identical. In such a situation, they should be plunged *overhead*, covering the crown with six inches of finely-sifted old tan or vegetable mould.

"In about three weeks or a month from their introduction to such conditions, they will begin to show their heads above the soil ; and here what is termed in horticultural language 'cooling down,' must be resorted to. They have to be gradually inured to the light, and this is the work of another fortnight or so. Any structure which will afford them a gradually departing shade, with a temperature of fifty to sixty degrees, is the very place for them. And now, for the first time since their introduction to artificial warmth, occasional waterings will be requisite. As before observed, the Lily loves moisture, and weak and clear liquid manure may occasionally be administered. When the blossoms begin to unfold, any cool greenhouse will suit them ; a depressed temperature, minus frost, will but tend to render the blossoms finer; so that whether fancy points to the drawing-room, the boudoir, or the snug parlour, it is all the same: anything but a very *high* temperature.

"In conclusion, I may add, that those cultivated in the open soil, for later purposes, must be placed in pots in the middle of November, and, after a thorough watering, plunged overhead in any dry spot out-doors, and then subjected to the same ordeal in their turn. Like most other 'rest roots,' they produce the finest flowers by a gradual course of forcing, especially whilst the torpid root is acquiring a fresh action.

"After forcing, the roots may have a renewal of their vigour by kindly attention, in the way of shelter, top-dressing, liquid manure, &c. I prefer, however, a fresh succession, and plant out the rejected ones in the common borders."—ROBERT ERRINGTON, *Oulton Park*.

HOW TO HEAT A SMALL GREENHOUSE CHEAPLY.—Being fond of flowers, I put a window 10 feet by 5 into my lobby, with a stand in front, endeavouring, by the addition of a stove, to preserve some plants over the winter. The exposure was to the north, and two-thirds of them were destroyed by damping off, or otherwise. Under such circumstances I resolved to erect a small greenhouse, with an exposure to the south ; and here I wish the particular attention of such as are similarly situated with myself, that is, not overburdened with cash, and therefore who desire to be as moderate as possible in the erection of a greenhouse. I bought old windows, 8 feet by 4½ ; the cost of each was 9*s*., and put glass cupolas on the top as a roof, 2½ feet in height. The size of the house is 8 feet by 8, and consequently at the highest point 10½ feet. The total expense, after painting, was under £10. The roofing consists of two cupolas, each 8 feet long by 4 feet wide, with a zinc conduit between and round the whole house. The next point to be considered was an effectual mode of heating the same, and at how little expense, during the winter season. As I live in Edinburgh, in inclement weather my gardener and his wife remove from their cottage and live in my kitchen during my absence, consequently a fire is kept on there night and day. The idea struck me that a pipe placed in the fire, open at both ends, the one end open under the bottom of the grate, and which pipe, after being led the whole length of the fireplace, and being again conducted a second time through the fire, and thence through the wall into the greenhouse, might effect the purpose desired. It has been in operation now for three years, and has succeeded most admirably, without a farthing more cost to me. There is a stop on the end of the pipe which enters into the greenhouse, by which the heat can be excluded when necessary. The expense of the pipe, with building, was under £5. Its diameter is three inches, and the surrounding cast-iron half an inch in thickness. It is of great importance to have the iron pipe of heavy metal; for should the fire go out in the night, hours will elapse before it becomes so cold as not to be a protection from frost.—*W. K. A., in Gard. Chron.*

HEATING GREENHOUSES WITH GAS.—About two months ago, a gentleman in my neighbourhood asked me what was the most economical way of heating a greenhouse 12 feet by 9. An idea struck me, that if a small gas-pipe could be brought under ground from the house to the greenhouse, and then carried through the latter by piping, it would answer. This has been effected in the following cheap and easy manner. A wrought-iron box was made two feet square, with a door in it for opening to light the gas, as well as to give it air to burn with. This box was fixed in the brickwork, near the back of the east end of the house; from this a 3-inch pipe fixed near the top of the iron box, was led to the other end of the house, from which, after rising six inches higher, it was conducted back again and passed through the end of the house into the open air, where, forming a bend, it ran up the outside in the shape of a chimney, with a little cap on the top to keep out the rain. The gentleman has had this contrivance lighted several times to show it to his friends, who are all so satisfied with it that they mean to have one put up for themselves. The burner is a fish-tail, which can be regulated so as to furnish much heat or little. No lighting till required is needed; no burning or overheating over-night; and as to economy, when full on, it burns six feet of gas per hour. Instead of wrought-iron pipes, however, they should have been cast-iron, with saddles on them to hold water; but even in the present case a zinc saddle might be made to answer. I had the gas lighted when I went to inspect it, and in five minutes the pipe was hot at the other end of the house. This simple apparatus will not rest here; if gas can be applied upon a small scale it can upon a large one, and no doubt in time forcing-houses will be warmed by it, as well as melon and cucumber-pits, &c. But I hear some one say, "Country places cannot have it." Cannot gentlemen put up a small gas apparatus? Only one fire would then be wanted for an entire establishment.—*James Cathill, Camberwell.*

The difficulty with gas has always been that it burns the air, and also contaminates it by escape. It is indispensable that both these evils should be effectually guarded against; not an easy thing to do, as is shown by a number of failures.—*Dr. Lindley. (Gardeners' Chronicle).*

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

PROCEED with all despatch to plant shrubs, herbaceous plants, &c., to enable each to become established before spring. In the protection of tender things, the principles demanding attention are few and simple. A comparative degree of dryness is the first great essential, whether in the atmosphere or the soil. In a frame or pit, this amount of dryness cannot be guaranteed without motion in the air; and this, of course, in the absence of fire-heat, must be accomplished by a very free ventilation at every fitting opportunity, remembering that a small amount of frost is, in general, less prejudicial than an *accumulation of damp,* which will rapidly tend to a kind of mortification in the system of the plant. The same atmospheric conditions are to be obtained out of doors, as far as attention can secure them; thus, half-hardy plants against trellises or detached, if covered with a mat and stuffed closely with hay inside, will be in danger of perishing of what we may for the present term suffocation; the same specimen will always run through a long winter better with the mat alone, more especially if the collar is well protected by some dry and porous material, and, above all, the root well top-dressed with sawdust or ashes, or perhaps the two blended. As to comparative dryness of the soil, that must be accomplished principally by the most perfect drainage; this is, indeed, the greatest desideratum with plants of tender habits; indeed, without it, other appliances are seldom satisfactory. Mounds of new sawdust, or dry leaves, raised around the stem, with a considerable body over the soil as far as the root ranges, will be found of immense benefit, as retaining the ground heat, which we believe ascends in a progressive way up the stem, to alleviate the effects of very severe weather. Standard and dwarf Roses of tender character will need protection. Finish directly the planting of all bulbs and Ranunculus, &c., which are intended to be put in before winter; a little sand round each will assist in preserving them from wet. Also plant out in a sheltered situation Brompton or Queen Stocks, so that they may be protected in winter, and reserved for planting out in spring. Tubers of Salvia patens, &c., should be kept dry. Plants of spring flowers, as Hepaticas, Primroses, Polyanthuses, Auriculas, Wallflowers, bulbs, &c., should now be planted near the dwelling-house.

FLORIST'S FLOWERS.—*Auriculas* and *Polyanthuses* still require well looking after. A free circulation of air amongst the pots may be given by raising the frame a few inches from the ground. *Tulips* should be planted as the first opportunities offer. The readiest and most regular way is to plant them on the surface of the bed unfilled to within four inches of the destined surface. Seven strings are then stretched lengthways at equal distances, and secured by nails at each end of the bed; when the bulbs are planted a short line crosses these, and a bulb is placed at each section; the small line is then removed the requisite distance, and another row put in. When the bed is planted, the strings are removed, and four inches of soil placed over the roots very carefully, so that none are displaced. *Hyacinths* should, if not already done, be potted or glassed immediately. For blooming in glasses, use *rain or river-water,* fill up the glasses until it will *just touch the bottom of the bulb;* place them in total darkness, and change the solution about once a fortnight; in doing this, hold the bulb in its place, and pour out the contents, filling up again as before. In a few weeks, the roots having advanced considerably, they may be removed to a window or other light situation. Those in pots should be placed side by side out-doors, and have old spent bark, or old rotted leaf mould, &c., spread over them to the depth of six inches; and when the flowering head is clearly seen inside its leaves, which, by examining, will be ascertained, then remove them into a forcing-house, or greenhouse, sitting-room, &c., placing them in full light. *Pansies'* straggling shoots may now be cut closely, leaving a joint above the ground, and hoops should be placed over the choicest beds, that protection may be given in the event of sudden frost. *Carnations* will require all the air and exposure possible in damp weather, avoiding continuous wet; when plants appear mildewed, sprinkle a little sulphur over and under. *Pinks*—occasionally stir between the rows of plants. *Dahlias* should be taken up, advantage being taken of fine days; secure the labels firmly. *Chrysanthemums* should be placed where they can be freely ventilated, as they ought not to be kept close or warm, or they would soon become drawn, and be attacked by insects.

IN THE GREENHOUSE, COLD FRAME, &c.

The proverbial dulness and dampness of the external atmosphere generally prevailing during this month is sufficient to induce more than the ordinary amount of care and attention. Ventilation on all favourable opportunities is therefore highly necessary, closing the sashes early in the afternoon, when a clear sky indicates frost; this precaution will often prevent the necessity of making fires in these houses. Give water sparingly, especially to plants which are impatient of wet, such as Calceolarias. Pelargoniums, and what are called Scarlet Geraniums, such as have been in beds and newly potted, should be kept *nearly dry* till they strike root afresh. For want of this care, vast numbers are destroyed. Repot show Pelargoniums.

IN THE FORCING PIT OR STOVE.

All hardy and half-hardy plants brought in for forcing should have a temperature at first of from 50° to 60°, to be increased up to 75° when more advanced; but as many plants will not bear such heat, and others will not do much good without a high temperature, there should be two distinct pits, or divisions, at least, for this purpose. The double Roman Narcissus is the first of the forced bulbs, and where they have been potted early in August they will now stand 60° of heat, and will be in flower by the end of this month. Cyclamens that have made good roots will stand forcing for a short time, and will soon throw up their blooms; but, like bulbs of all sorts, they are injured by forcing *before their roots* are made.

Introduce Roses, Lilacs, Violets, Lilies of the Valley, and other plants, to bring them early into bloom. Chinese Primroses, sown last spring, should be encouraged, that they may blossom about Christmas. These are extremely subject to suffer from damp; they ought, consequently, to occupy a dry and airy situation during the winter.

BRIEF REMARKS.

Propagation of the Hollyhock.—Mr. Appleby, in the *Cottage Gardener*, details a method of rapidly propagating hollyhocks, as practised by Mr. Macintosh, of Edgeware-road. He observes, he took off the bottom side shoots, cut them into lengths, put them into pots filled with light soil, which he pressed down tight to each cutting, plunged these pots of cuttings into a gentle bottom heat, watering but little till they showed signs of growth, and soon had the satisfaction of finding his cuttings produce roots, which, as soon as he perceived, he potted them off into small pots, and kept them in a cold frame till they were well established and ready for planting out. But this was not all; the side flower-stems were cut off, and every joint, whether it had leaves or not, was cut off just below the joint, leaving about an inch of the stem above the joint. Each joint had a dormant bud, which, when isolated, and placed in shallow pots in a gentle stimulative, started into growth, and soon showed a shoot projecting above the soil; this, in time, as the leaves unfolded, pushed forth roots, and formed a plant. This method, with which we were much pleased, shows that wherever a bud is, it contains within itself the germ of an entire plant, which, when correctly managed, can be formed into a plant, equal in vigour, and in every way as perfect an individual as the plant from which it was cut or taken.

This propagation should, of course, be performed as soon as possible. Cuttings are not safe to put in later than August, because there would then be a danger of such very young plants being not carried safely through the winter.—*T. Appleby.*

Standard Salvia fulgens.—Recently visiting a nobleman's celebrated gardens, I was particularly pleased with a number of STANDARD plants of this rich crimson flowered salvia. They had been formed some years. The main stem was an inch and a half or more in diameter, quite hard and woody, and each stem a yard clear below the fine branching head. The plants were in magnificent bloom, and were growing in two rows, one on each side of a walk. Each winter they are taken up, protected, the heads cut back, and replanted in spring.—*Flora.*

Black Beetles (*Blatta Orientalis*).—At a recent meeting of the Entomological Society, it was stated by Mr. Hunter, that the *black beetles*, so annoying in some kitchens and plant-stoves, are readily destroyed by giving them *powdered* plaister of Paris (gypsum) mixed with oatmeal. As all may not partake of the repast at any one time, follow it up at short intervals for a time. It will kill them.

Cape Bulbs.—Some one conversant with the subject would oblige me with immediate information as to what would be the best treatment for bulbous roots just received from the Cape of Good Hope. Some are of enormous size, three inches by five inches, and have started growing, though closely packed up, but no names attached to them.—*A Subscriber.*

Gravel and Gas-Tar Walks.—Noticing the detailed particulars on these, in an early Number for this year, I immediately had a considerable extent formed accordingly, and the result has been highly satisfactory. The walks were previously what are termed gravel-walks, but the cost of weeding was, for about two miles of them, a serious sum per annum, besides having to disturb the surface so much. Last April, however, I commenced operations in dry weather, of which we had a long continuance. I had the surface of the gravel swept and rolled very evenly. I then poured upon and spread the gas-tar regularly over it by means of the head of a wood rake, and as we proceeded bit by bit, I had some nice gravel sifted regularly and evenly over it, and soon the surface was as hard as concrete, and the walks have been much admired, and entirely clean from that day to the present; not even *one* weed has appeared. The smell of the tar passed off in the course of three days, and the walks have the gravel-colour appearance, and are quite smooth. They are admirably firm and *dry* in all weathers; rain, &c., not affecting their firmness. The cost of one year's weeding was much more than tarring the walks.—*Senex, Yorkshire.*

The Smell of New Paint.—A bundle of old dry hay, wetted and spread about, presents a multifarious absorbing surface for this; especially if not on the floor only, but over pieces of furniture which allow circulation of air, as chairs laid upon their faces, &c. Large vessels of water, as trays and pans, are not uncommonly used, with good effect; but the multiplied surfaces of the loose hay give it great advantage. It must be kept wet, however, or at least damp, for the oily vapour does not seem to be readily absorbed unless the air is kept moist by evaporation.—*Gazette.*

Compost for the Vigorous Growth of Chorozemas.—The best for the Chorozema is rich turfy peat, broken small, and mixed with sharp silver-sand, small potsherds, or charcoal. The addition of one-fourth of turfy sandy loam will be an improvement for the strong-growing varieties; but strong adhesive loam should not be used, and the weaker varieties are longer lived in peat, although their growth will not be equally rapid at first.—*An Exhibitor.*

Descriptive List of Gourds.—Having taken your "Floricultural Cabinet" since its commencement, and not finding any account of the different kinds of Gourds, so highly ornamental in pleasure-grounds, I wish some of your numerous correspondents would give a descriptive list of what is eatable, and what poisonous, and what most curious (I have several, the Bottle, Coasbard, Powder-horn, &c., &c.), in your next Number, if you can.—*Feronia.*

Mode of Drying Plants.—The specimens intended for preservation, after having been kept in a press for a few hours, are placed in an apparatus called the coquette, in which they are exposed to the sun, or placed in a stove, or in an oven. The coquette consists of two open covers, between which the paper containing the plants is pressed by straps or other means. The best kind of covers are pieces of strong iron wire net-work fastened into frames made of light iron rod. These open frames allow the moisture to escape freely, while boards, or milled boards, absorb and retain it. The name coquette was given to this contrivance, partly on account of the beauty of the specimens prepared with it, and partly in remembrance of its inventor, M. Lecoq, Professor of Natural History at Clermont-Ferrand (*Journ. de Pharm. et de Chim*). A pair of frames of this kind, with plenty of Bentall's paper, leave nothing to be desired.—*Bot. Gazette*, ii. 55. [The same result is obtained by using wooden frames formed of laths secured together by cross bars, so as to leave small vacancies between the laths.]

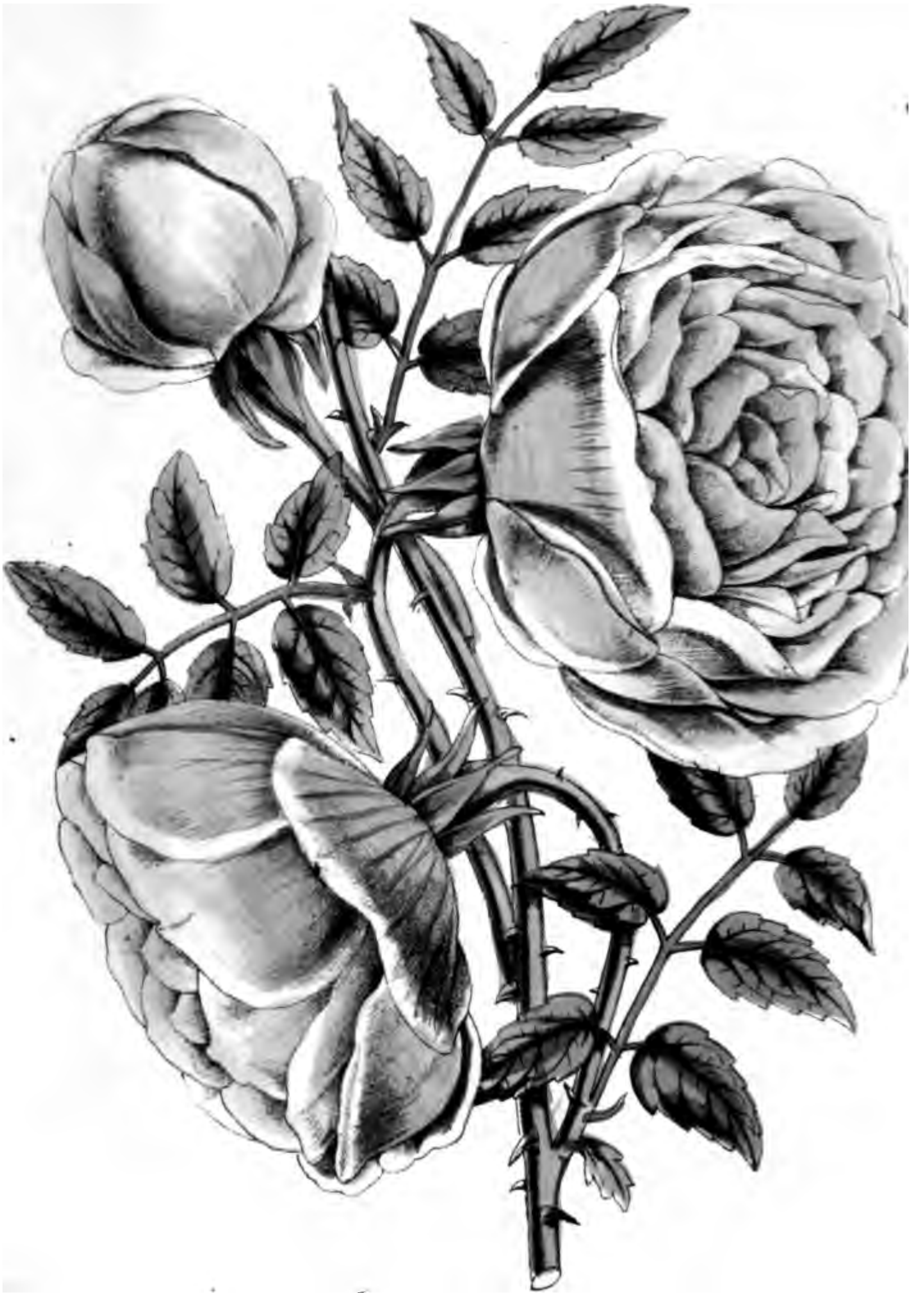
Acclimatising Plants.—I have given my continued best attention to the subject of acclimatising exotic plants at this place during the last thirty-five years; and I have made a written record of all the successful results during that time, some of which may perhaps be worthy of notice. Richardia, *i. e.*, Calla æthiopica, in pots, produces much seed, of which I sowed some in the open ground in the end of March, 1822, in a vegetable mould, on a clayey subsoil, latitude 55° 55′, altitude about 180 feet above the level of the sea. I put a broken one-light frame over it. In six or seven weeks several seedlings grew up, in all fifteen plants; here they continued to grow well until autumn, when I took them up with balls of earth, potted them, and kept them under glass all winter. One of these seedlings began to flower in thirteen months. In the spring of 1823 I planted it in the open border under a high wall with a western aspect, so that the sun did not shine on the plant till twelve o'clock; here it begins flowering in the end of May and June, and grows sometimes three feet high. One year it produced eleven flowers, and it has produced seeds. From 1823 it continued to grow and flourish, surviving the long-remembered severe winters of 1836-7-8; in the spring of 1838 it was first taken up; it was a large mass of roots, of which I replanted a portion in the same place, and it continues to grow and flower well. In October, 1851, I was compelled to take it up, owing to alterations; it had then a large cluster of green seeds. I cut the plant in halves, one of which is again growing in the same place under a wall, planted deep in cool loamy earth, in a shady, well-sheltered situation; and the part with seeds was put in a pot, and placed under glass. The cluster of seeds, half an ounce, ripened in the end of December, of which I sowed some in a pot on February 18, 1851, and raised twenty seedlings; they are planted now three in a pot, and one in a nine-inch pot; those planted three in a pot began flowering January 15, 1852, in less than a year from the time of their being sown. By various ways of managing, the plants are in flower nearly all the year. Several are growing, and flower well in other plants; under walls, in this situation, it produced seven large flowers last June. The above plant has been twice transplanted, and has lived upwards of thirty years. I have found as many as eight seeds in one berry; the largest seeds produced the hardiest plants, and two varieties—major and minor. A seedling Calla, in a nine-inch pot, grew 4½ feet high, and produced a large cluster of ripe seeds, which weighed 4½ ounces. A plant, in flower last February, was 4½ feet high, in a pot of rich earth, with sometimes two large twin leaves on one footstalk, and two columns in one flower; sometimes the flowers are double, so called here, with flowers seven inches wide; it is a graceful plant for a shady room or hall, or among statuary, &c. I have gathered two ounces of seeds in a year, besides the above. —*John-street*, *Biel*, *East Lothian*.

Shacklewell, Stoke Newington, and Hackney Amalgamated Floral Society, *Sept*. 1. Dealers.—24 Dahlias: 1st, Mr. C. Turner, with Mr. Seldon, Mr. Herbert; Princess Radzewill, General Faucher, Barmaid, Leda, Fame, Sir F. Bathurst, Queen of Whites, R. Cobden, Seraph, Chancellor, Morning Star, Sir R. Whittington, Fearless, G. Glenny, Sir C. Napier, Queen of Lilacs, Scarlet Eclipse, Kant, Miss Shears, Dr. Frampton, Sir R. Peel, and Gem of the Grove; 2nd, Mr. Legg, with Anticipation, Nil Desperandum, Mrs. Seldon, Leda, Fearless, Carmina, Lady St. Maur, Duke of Wellington, R. Cobden, Marchioness Cornwallis, Sir F. Bathurst, Sylph, Thames Bank Hero, Magnificent, Utilis, Queen of Beauty, Roundhead, Mr. Herbert, Admiral, Mr. Seldon, Miss Newman, Nonpareil, Queen of Yellows, Summit of Perfection; 3rd, Mr. Hunt,—12 Fancies: 1st, Mr. Legg, with Lady Grenville, Mrs. Hansard, Princess Charlotte, Mrs. Willis, Belle de Peyne, Jetty Treffz, Maid of Lodi, Saracen, Jenny Lind, Floral Beauty, Queen of Fancies, and Madame Bresson; 2nd, Mr. Turner, with Claude, Le Peon, Elegantissima, Lady Grenville, Princess Helena, Empereur de Maroc, Phaeton, Mrs. Hansard, Lord Lyndhurst, Duchess of Sutherland, and Jenny Lind. Amateurs.—12 blooms: 1st, Mr. Holmes, with G. Glenny, Duke of Cambridge, Richard Cobden, Miss C. Bacon, Sir F. Bathurst, Miss Newman, Duke of Wellington, El Dorado, Jullien, Summit of Perfection, Marchioness Cornwallis, and Mr. Seldon; 2nd, Mr. Robinson, with General Fauchier, Ambassadeur, Queen of Lilacs, Mr. Seldon, Richard Cobden, Fearless, Sylph, Shylock, Nil Desperandum, Sir F. Bathurst, Roundhead, and Sir C. Napier; 3rd, Mr. Weedon, with Negro, Queen of Lilacs, Mr. Seldon, Model, Sir F. Bathurst, Leda, Fearless, Duke of Wellington, Blanchfleur, Nil Desperandum, and Gem of the Grove; 4th, Mr. Prockter, with General Fauchier, Fame, Duke of Wellington, Victory, Richard Cobden, Queen of Lilacs, Sir F. Bathurst, El Dorado, Fearless, Jullien, C. Turner, and Sir C. Napier. Six Fancies: 1st, Mr. Prockter, with Queen of Fancies, Miss Weyland, Mrs. Hansard, Spectabilis, Miss Bathurst, and Gloire de Kain; 2nd, Mr. J. Edwards, Holloway, with Elizabeth, Reine Pomare, Highland Chief, Miss Compton, Mrs. Hansard, and Jenny Lind; 3rd, Mr. James, with Princess Charlotte, Mrs. Hansard, Empereur de Maroc, General Cavaignac, Phaeton, and Triumphant; 4th, Mr. Humber, with Rachael, Flying Dutchman, Mrs. Hansard, Miss Compton, Mrs. Labouchere, and Floral Beauty. Six other collections were staged in this class, and it is worthy of remark that in every pan Mrs. Hansard was introduced, showing that this fine variety is becoming highly popular. Six new flowers: 1st, Mr. Robinson, with Morning Star, Queen of Whites, Phantom, Alice, Miss Ward (without the white tips), and Sir R. Whittington; 2nd, Mr. J. Edwards, Holloway, with Edmund Foster, Morning Star, Triumphant, Alice, Sir R. Whittington, and Dr. Frampton; 3rd, Mr. Holder, with Morning Star, Sir R. Whittington, Queen of Whites, Miss Ward, Sir F. Thesiger, and Malvina; 4th, Mr. James, with Morning Star, Queen of Whites, Sir R. Whittington, Red Gauntlet, Douglas Jerrold, and Dr. Frampton. First Class Certificates were granted to the following six varieties, and an interesting exhibition was made by a specimen of each being set up in a regular board. We enumerate them as set up in the stand: Sir J. Franklin (Turner) previously described by us; Miss Matthews (Bragg) scarlet, tipped with white, a fancy flower remarkable for its depth; Bob (Drummond) a brilliant scarlet, deep, well-arranged, and fine centre; Miss Caroline (Brittle) a blush flower in the way of Marchioness Cornwallis, but much thicker; Beauty of the Grove (Burgess) pale buff yellow with dark rosy tips, attractive, and with plenty of "stuff" to warrant good growth; Lord Byron (Pope), rosy salmon, new in colour, large smooth petal, of good outline. Other seedlings were shown possessing many excellent points, and foremost among these was Lady Dalrymple (Turvill), lilac blush, boldly tipped with purple; Plantagenet (Turner), rosy lilac, bold; Sir J. Paxton, dull yellow, inclined to colour on the edge; Lady Folkstone, blush; Miss F. Moriers (Union) a tricolor, dark yellow base, sides crimson, tip white; Marchioness Douro, clear yellow. Of other novelties, Mr. Edwards contributed a flower of a striped fancy seedling, colours scarlet and deep yellow, evenly balanced in regular stripes. The general opinion regarding this flower was that for form, centre, and petal, it is unequalled in its class. It was compared with Rembrandt and Spectabilis, flowers intimately in the way of it so far as colour is concerned, but much behind it in every quality constituting perfection; the praise bestowed on it was so unanimous, that it is intended to call it Unanimity (Edwards).

PELARGONIUMS DURING OCTOBER.—Mr. Dobson, in his excellent Treatise says:—By the beginning of October the plants (well-rooted cuttings in 2 and 3-inch pots, with their tops pinched off), may be again shifted, that is, if they are sufficiently strong, into 4-inch pots, keeping in mind the same treatment as was recommended in potting them off, except in stopping them, which must be done according to the time they are required to be in flower; June is the principal month. Plants, therefore, that are required for June should be stopped back about the second or third week in December, when they must be kept dry till the eyes are visible. As soon as they are sufficiently broken, they may be again shifted into their blooming-pots; a 6-inch pot will be quite large enough for an autumn-struck cutting, as the plants must not be making growth while they are in flower. They will require no more shifting till after they are cut down, when they may be prepared for making specimens.

MANDEVILLA SUAVEOLENS.--In a recent visit to the Botanic Gardens at Montpelier, I observed Mandevilla suaveolens growing over a trellis as a hardy climber. With a view to test the severity of the winter, I inquired what species of Passiflora flourished under similar treatment, and learnt that none but P. cærulea would live there out-of-doors; all others which had been tried had been killed by frost in winter. On my remarking that P. cærulea flourished in England, the gardener assured me that Mandevilla was decidedly more hardy; and that where P. cærulea flourished, he had no doubt Mandevilla would equally. In accordance with this statement, I observe that a branch of Mandevilla which has grown out through the roof of my greenhouse, is this day (October 18) in perfect flower, having been exposed about ten days ago to a frost which injured French-beans, Convolvulus major, caused the leaves of Mangold-wurtzel to droop, and so damaged flowers of Passiflora cærulea against a wall, that they did not expand. I should remark that the greenhouse is span-roofed, so that the Mandevilla was exposed both to wind and radiation without any protection whatever. I mention this to induce others to try Mandevilla, as I intend to do next year, against a wall where Passiflora flourishes. I may add, that the frosts at Montpelier are occasionally so severe that Cupressus lusitanica was severely injured, and Oranges and Olives killed outright. On the other hand, from the heat of the summer Nelumbium both flowers and seeds in a tank in the middle of the garden.—J. R.—*Gardeners' Chronicle.*

DIELYTRA SPECTABILIS.—The following is some account of, perhaps, the most splendid specimen of this Fumewort that has ever been grown in this country. The plant to which I allude was planted the year before last in the garden of a gentleman at Lexden Heath, near Colchester, and was then only a few inches high. During that and the last year it grew and flourished wonderfully, but this year it reached a size and form that very far surpasses anything of the kind that I ever heard of. In the middle of August it became necessary to cut it down, on account of its enormous size, to prevent it from destroying some neighbouring Roses, and it then measured upwards of 30 feet in circumference, and 5 feet in height. I have never had an opportunity of examining it closely, but I have constantly seen and admired it from the road in passing by, and I have repeatedly heard from one who has been inside the garden, that what I have here stated is entirely correct. I have also been told that between April and August it frequently bore upwards of 200 perfect spikes of flowers at once, and that it had not a single stem or branch broken by the wind, although in a very bleak and exposed situation. I should add, that it is planted in the richest artificial soil that can be made, and that in winter it is left wholly unprotected. In the flower-garden of the same gentleman there are also extraordinary specimens of the Myoporum tenuifolium, the two sorts of Vincas, and of the new Cantua dependans; I have not seen them myself, but I am informed by good authority that they are of a size and form far beyond anything ever attained in any of our best-managed greenhouses, owing entirely, I believe, to the soil which is given to them.--*A Lover of Flowers.*



Fortune's Double Yellow Rose.

DECEMBER, 1852.

ILLUSTRATIONS.

FORTUNE'S DOUBLE YELLOW, *or Wang-jang-ve* ROSE.

THE Horticultural Society sent Mr. Fortune to China to collect plants, and along with other valuable ones he forwarded to the Society's garden, in 1845, was the highly ornamental "Climbing Rose," which we now figure. From the remarks that he communicated about the Rose, great expectations were entertained of its beauty, &c. Its subsequent culture, however, in our own country, in various places, proved very different; but few blossoms were produced, and those of inferior size. In consequence of such failures, after what had been described of its excellencies by Mr. Fortune, a considerable prejudice against the Rose has arisen. This has resulted, however, from the "improper treatment" which has been pursued with the plant. Our readers will recollect that the treatment in pruning the "Banksian Rose" is very different to that applied to the general Roses of our gardens; the former requires a *summer* dressing and pruning, but the latter require it in *winter*. Fortune's Yellow Rose must be treated similar to the Banksian, but the treatment usually given to the other class of Roses mentioned had been pursued with it; hence the failure and disappointment resulting. The Banksian Rose does not produce its flowers on the wood of the *present year's* growth as other roses do, but on the wood of the *previous year*, therefore the great object must be to obtain strong *well-ripened* wood of this season to supply the bloom of next year. The principal attention to effect this is to treat the Rose very similar to what is practised with the Peach-tree, as it regards its summer regulation of new shoots by thinning away the superfluous shoots, retaining only those which have bloom upon them, and a due proportion being left for the following year's bloom. Towards the end of April hand-dress the Rose-tree, when the shoots will be about four inches long. Again, in July or early part of August look over the Rose, and stop the leads by cutting away about one-third of each; and, not to have the plant crowded, cut some clean away, or so as only to leave about three inches to form spurs of bloom. The wood now left, being kept nicely open, will have a proper chance of ripening by the end of summer. The shoots will require to be duly secured to the wall or trellis. If this attention to its pruning in summer be duly observed, it requires no other pruning during winter, and a constant and profuse bloom may be secured every year. We have adopted the plan for several years with the greatest success, the white and yellow blooming most profusely.

Now, this method of treatment must be pursued with the Rose we figure, under precisely similar circumstances, and, as we saw in the nursery of Messrs. Standish and Noble, of Bagshot, during the past summer, where plants of it were in *most profuse bloom,* it will prove to be exceedingly beautiful and ornamental. It is a rapid grower, and quite hardy, excellent for covering a wall or trellis, or grown as a pillar rose.

The following account of the Rose is given in the "Journal of the Horticultural Society," vol.vi., p. 52, 1851, by Dr. Lindley. "Mr. Fortune tells us, 'the Rose you inquire about is well known to me, and was discovered in the garden of a rich Mandarin at Ningpo. It completely covered an old wall in the garden, and was in full bloom at the time of my visit: masses of glowing yellowish and salmon-coloured flowers hung down in the greatest profusion, and produced a most striking effect. It is called by the Chinese, the Wang-jang-ve, or Yellow Rose. They vary, however, a good deal in colour; a circumstance which, in my opinion, adds not a little to the beauty and character of the plant. I fancy it is quite distinct from any other known variety, and certainly different from any China kind. It is admirably adapted for covering walls; and if planted in *rich soil,* and *allowed to grow its* **FULL SIZE,** nothing can produce a finer effect in our gardens.' "

Had Mr. Fortune's directions as to its being allowed to grow without having its shoots shortened, we should have had this fine Rose some years ago flourishing as it now does at Bagshot with Messrs. Standish and Noble. To see it thus however, we must be content to wait till "gentle spring" and "refulgent summer" arrives:

" Come gentle Spring, etherial mildness, come,
And from the bosom of yon dripping cloud,
While music wakes around, veil'd in a shower
Of shadowing roses, on our plains descend."

THOMSON.

NOTES ON NEW OR RARE PLANTS.

BEGONIA XANTHINA.—Roots of this very handsome flowering species were sent to Mr. Nuttall, of Rainhill, near Preston, by Mr. Booth, from the Island of Boutan. It bloomed in the stove at Rainhill during the last summer. The flower *stems* rise about a foot high, each terminating in a many-flowered corymbous head of "*rich yellow*" blossoms, tinged at the back with red. The leaves (each) are about six inches long, of a deep green above and red beneath. Each blossom is an inch across. It is exceedingly pretty, and merits a place in every stove. (Figured in *Bot. Mag.*, 4683.)

CLEISOSTOME CRASSIFOLIUM. — A stove Orchid, introduced into this country by Messrs. Veitch from the East Indies. The flower stem is about a foot high, and the numerous blossoms are produced in a panicle of short spikes; each flower being half an inch across. Sepals and petals greenish yellow, and the lip a rosy violet-colour. (Figured in *Paxton's Flower Garden*, plate 99.)

MALVA INVOLUCRATA (Synonyme, Nuttallia involucrata).—Seeds of this pretty flowering "*hardy perennial*" were sent from the Texas, by Dr. Engellman, to the Royal Gardens of Kew. The flower stems extend about two feet, lying upon the ground, the ends rising upwards, each bearing numerous blossoms, and every flower two inches across, of a deep red purple, having a large pale yellow centre. It is a charming plant for the flower-garden. (Figured in *Bot. Mag.*, 4681.)

MYOSOTIS AZORICA, the Azorean Forget-me-not.—This very pretty flowering plant we figured several years ago; it is a half-hardy perennial. It is a native of some of the Azorean Islands, where it grows about waterfalls, and on wet rocks having a north-east aspect. Its proper habitat appears to be on mountains following the course of rocky mountain streams, where the air is kept damp by the spray of the water. It blooms freely, and its racemes and corymbous heads of deep rich flowers, having a yellow eye, are very pretty. The plant does well during summer in the open bed, but must be in a rather shady place. It succeeds well too in a pit-frame or greenhouse, but must have a free air, or it will be drawn up weakly. If the tops of the shoots be pinched off early in the season, side shoots are produced, and the plant becomes bushy, and blooms in perfection. (Figured in *Paxton's Flower Garden*, 97.)

NYMPHÆA DEVONIENSIS. — This splendid Water Lily we recently noticed, when remarking on the figure of it, given in the *Botanical Magazine*. A fine figure of this noble flower is now given in *Paxton's Flower Garden*, 98th plate. It has been supposed to be an hybrid, produced by crossing Nymphæa rubra with N. lotus, but it is subsequently considered to be an hybrid between N. rubra and N. dentata. Each flower is about eight inches across, of a bright rosy crimson colour. The plant blooms very freely, and at Chatsworth was in blossom from April 12th to the middle of October, and even then had a fine succession of flower-buds. It is a very valuable acquisition, and we trust is the precursor to many other handsome hybrids. This class would be highly improved by the growers of water plants hybridizing with the finest kinds.

RUBUS BIFLORUS.—*Twin-flowering Raspberry.*—This very handsome Bramble has been obtained from Nepaul by Messrs. Veitch. It is quite hardy and very ornamental. The stems spring from the ground on clusters, like our common Raspberry, and attains a height of ten to twelve feet, erect, branched. The stems are very white, appearing as if they had been whitewashed. The flowers are produced in profusion, white, each blossom nearly an inch across; they are succeeded by yellflavoured fruit, as large as a usual-sized Raspberry, and of a beautiful orange or deep amber colour. It is not valuable as an ornament for the shrubbery, but would be a handsome, agreeable-flavoured fruit for the table. (Figured in *Bot. Mag.*, 4678.)

GAURA LINDHEIMERI.—A plant belonging to the Clarkias, &c. It is a branching perennial herbaceous plant, growing three to four feet high, and blooming in profusion from July to October. The flowers are produced in long twiggy spikes, each blossom being an inch across; white or deep pink. It is easily increased from seeds, and is best treated as a half-hardy triennial. It does not flower till the *second* season. If seeds be sown so as to get plants strong enough to endure winter, and being turned into beds in spring, will bloom that season. It is showy for a border of mixed plants, or the skirts of a plantation.

HELIOPHILA PILOSA (Cruciform Order).—A hardy annual from the Cape of Good Hope. It grows about eighteen inches high, and the flowers are produced in terminal spikes, of a bright blue, and each blossom half an inch across. It is a charming ornament for the borders in summer, and seeds freely. It is also called H. arabidoides.

PELARGONIUM FOLIOLOSUM. — This is one of what are usually called "Cape Geraniums," Mr. Wicks, a collector of Cape plants, introduced it into England. It is one of the fleshy-rooted species. The flowers are produced in umbels, six or eight blossoms in each; they are of a *pale yellow* colour. It will be valuable as a breeder, from which some of our light flowers may be impregnated, and larger *yellow* blossomed varieties be obtained. All the Cape Pelargoniums require to be grown in a good, rich, sandy soil, and to be kept *dry* in winter. This yellow-flowered species, we understand, is in the Horticultural Society's garden at Chiswick.

HEINTZIA TIGRINA.—Mr. Karstan discovered this noble Gesneras-like plant in shady situations on the mountains of Caraccus, where it grows *five* or *six feet* high. The leaves are one foot long. Each blossom is about two inches long, the calyx being of a rich rose-colour, with a green rib in the middle of each sepal. The corolla is pure white, with numerous blood-coloured spots on the expanded portion. It is a fine species, and will become one of the best stove plants. It requires a similar treatment to the Gesneras, Gloxinias, Sumingias, &c. It is in Mr. Van Houtte's collection, in Belgium.

SALVIA RÆMERIANA.—A native of the Texas, where it grows in the woods. It is a half-shrubby plant, and with us a half-hardy one. The flowers are produced in very long spikes, rather small, of a rich crimson colour. It is in the Chelsea Botanic Garden, and grows about two feet high.

LILIUM GIGANTEUM.—This noble Lily, growing to the height of ten feet, we find will endure without injury in the open ground, having a covering of dry leaves, or ashes over the roots in winter. It ought to be grown in every garden.

LILIUM BROWNII.—A hardy kind, having large trumpet-shaped flowers, white, with the outside marked with bronze-purple.

LILIUM LONGIFLORUM.—The flowers are large, trumpet-shaped, pure white.

These Lilies, with all those of Lilium lancifolium, which are quite hardy, should *now* be procured and planted immediately for next year's blooming.

Plants in bloom in the Royal Gardens at Kew.

Lapageria Rosea.—In *June*, 1850, we gave a figure of this very handsome flower, but it was drawn from a flower produced by a weakly plant. A plant has been grown in the Royal Gardens, out-doors, trained against a wall, where it showed for bloom; being late in the summer, it was taken up and removed into a cool house, appropriated for Ferns, and there trained to the back wall, the roof sloping to the north; the face of the back wall is shaded from the sun, and cool; here it has bloomed charmingly. Each flower is "trumpet-shaped," and the tube four inches long, with the expanded mouth downwards; thus drooping, such large flowers have a very interesting and pretty appearance. They are of a bright rosy-crimson, with the inside beautifully ornamented with numerous white dots. Handsome as was the flower we figured, to which we refer our readers, the flowers at Kew are much superior. It is a native of Chili, an evergreen, half-shrubby plant, adapted for training to a pillar, wall, or wire-work frame. It highly merits a place in every Greenhouse or Conservatory, or trained against a wall. The plant is a free bloomer, and one of the finest that has been introduced for many years.

Gynerium Argenteum.—This is the celebrated "Pampas grass" of Brazil. There is a noble specimen growing in the open bed in the Royal Gardens, having about thirty flower stems, nearly four yards high, each terminating with a feathery-looking panicled head, two feet long, and of a beautiful silvery appearance. The plant is very numerously furnished with leaves, which are about nine feet long, narrow, and deeply saw-toothed on both edges. The plant requires a rich, deep soil, and to stand alone in an open situation. Its bushy mass of fine leaves, and its magnificent floral stems, present a noble appearance.

Gloxinia maculata.—There are several fine plants in bloom in the stove; one had seven spikes of flowers, three feet high, and the centre spike had had thirty flowers upon it. It is not only a noble growing plant, but its French-white, stout blossoms, with a dark blotch in the inside, are very handsome. It continues to bloom for several months, and if treated with a view to succession, two plants would, started at different but distant times, supply flowers all the year. It merits a place in every stove or warm greenhouse. If the plant be started in a hotbed frame, and retained there till it is a foot or more high, it may be removed into the greenhouse to bloom.

Eranthemum montanum.—A neat bushy plant, blooming freely. The tube of each blossom is three inches long, white; the end (limb) is five, parted an inch and a half across, of a pretty French lilac colour. It merits a place in every stove.

Cypripedium *venustum*, C. *insigne*, and C. *barbatum*, are in beautiful flower in the stove. These "Ladies' Slippers," are particularly interesting; the singular form, in varied colours of green, with, yellow, brown, and purple, render them, too, very handsome. They bloom freely throughout autumn and winter.

JUSTICIA SPECIOSA.—This is a showy, winter, blooming, stove-plant, its profusion of rosy-violet flowers are very gay. It forms a neat bush.

TURNERA ELEGANS.—A neat-growing stove-plant, blooming freely. The flowers are funnel-shaped, of a pale yellow colour, having a band of deep yellow, which encircles a black centre; very pretty through winter.

In the Greenhouse.—ACACIA OLŒFOLIA.—A neat plant, with oval leaves about an inch long. The large globe flowers are produced in long spikes, of a deep yellow colour. Blooming thus early renders it more valuable too. It deserves to be in every greenhouse.

ACACIA UNDULŒFOLIA.—Small, waved, neat leaves. The flowers are in small globes, of a bright yellow ; pretty.

LASIOPETALUM EROSUM.—A bushy plant. The flowers are in form like those of the potato, lilac, with black anthers, pretty, and are in profusion. It blooms through winter, and well merits a place in the greenhouse.

LABECKIA LANCEOLATA.—A stiff, bushy plant, with bright yellow (Cistus-like) flowers, each blossom an inch across.

LOBELIUS.—Numerous pots of the dwarf-creeping kinds were now in profuse bloom; their bright blue and white flowers had a very pretty appearance.

LOTUS LUTEUS.—Plant similar to the well-known dark-flowered in appearance, but the flowers are a bright yellow, and pretty for winter bloom.

CHOROZEMA FLAVA.—A neat plant, *now* blooming freely. The flowers are of a "bright yellow," with a "white keel" half an inch across. It is very pretty, and merits a place in every greenhouse.

MALVA BILOBA.—A neat shrub, blooming very freely; the flowers are white, an inch across ; it appears likely to bloom all winter ; it has a cheerful appearance.

THOMASIA STIPULACEA.—A bushy shrub, with a profusion of potato-like flowers, each an inch and a half across; a pale lilac, with a black eye of anthers ; pretty.

VERONICA ANDERSONI.—A pretty flowery hybrid. The plant is not such a robust-growing shrub as V. Speciosa, but has long spikes of rosy lavender-coloured flowers ; at this season some of the spikes are white.

In the open border, under south, east, and west aspected walls, there are numerous patches of *Oxalis Roseus* in profuse bloom. It is a pretty plant for the season. Also *Verbena Geranifolia,* on the same borders, forms a close broad bush, three feet high, and blooms profusely. The flowers, in heads, are of a most beautiful deep rose-colour. It is a charming plant for autumn bloom out-doors, and in pots would be very ornamental for the greenhouse no doubt through winter. Its pretty jagged, geranium-like foliage has a neat appearance.

The following BERBERISES are very fine kinds:

B. Leschenaulti.—It is an evergreen, each leaf being about fifteen inches long, having eight pairs of leaflets and a terminal one. It is a most beautiful species, and deserves to be grown in every shrubbery.

B. Nepalensis.—An evergreen, with light green, large foliage; each leaf having five pairs and a terminal one, with a few strong dentations on each,

B. tenuifolia.—Evergreen, leaves long, with five pairs and a terminal one; smooth, willow-like. Very neat.

In the Stove.—Achimenes Hillii, a hybrid raised here. Its growth is much like a Gesnera, the flowering stem being a yard high, and nearly the whole of it bears blossoms. The leaves are in pairs, and from the base of each five flowers are produced, on rather long footstalks. The tube of each blossom is an inch and a half long, outside scarlet, and the inside of a deep golden yellow, the end (limb) is spotted with red. It is a charming variety, and, like *A. picta,* appears to be admirable for autumn and winter flowering.

VARIEGATION IN PLANTS.

BY DR. MORREN, PROFESSOR IN THE UNIVERSITY OF LIEGE.

ANCIENT physiologists considered variegated leaves, as well as those having a naturally yellow tinge (when they are generally green in the same species), as particular diseases, which they classed among cachexies, and to which they gave the name of vegetable jaundice. It was not precisely that etiolation which is produced by the absence of light; for if the spotting were a jaundice, etiolation would be attended by chlorosis, or paleness. Variegation has continued to be held as a symptom of disease; neither have the researches which have been made respecting it been attended with any amount of positive information, as to the cause which produces this phenomenon, and especially on the nature of the tissues deviating from their habitual colour. The experiments of Knight on the fertilization of a White Chasselas, and a White Frontignan, by a Vine from Syria, led to the opinion that the variegation might be the result of hybridation, seeing that plants having variegated leaves were obtained by this operation in the instance alluded to. At the present day, when we possess new and more ample details on the streaking of flowers, and on the influence which the variously-coloured pollen exercises in the production of corollas with numerous tints, it would seem still more reasonable to believe that the variegation of leaves in plants raised from seed is indeed a phenomenon of which the first cause has its source in fertilization. But it may be remarked, that the production of a branch with variegated leaves, on an old tree whose leaves are of the usual green, materially invalidates this opinion. Even in plants raised from seed, variegation is a phenomenon sometimes so local that it appears at first absurd to seek the cause of it beyond the organ or part on which it is present. Take, for example, the Oxalis acetosella, on plants of which are sometimes found, among a good number of leaves quite green, one or two presenting a beautiful variegation; that is to say, a yellow reticulation on all the nerves and veins of the three obcordate folioles. In this case, the phenomenon is evidently quite local; and we shall, by-and-by, demonstrate the organic cause of variegation, this fact will be established beyond all doubt.

In 1830, M. Schlechtendal gave a long enumeration of variegated plants—a list of which is of considerable interest to horticulturists—since these "sickly" plants have excited, sometimes, a singular mania among amateurs, which has so often been turned to advantage by the trade. Miller relates, that in his time, when the variegated hollies were introduced to England, they excited so great a passion, or "rage," that all other plants seemed to be forgotten. We have, ourselves, known an amateur of Liege, who was so fond of these variegated hollies, that he left an order in his will to have a collection of them planted over his grave, and his heirs have religiously fulfilled his wish.

M. De Candolle, who is of opinion that all plants may present variegation, hesitates to class this phenomenon among those of physiology. To him, it appears sometimes a capricious monstrosity, allied to the reproduction of seed,—to hybridation; sometimes a resemblance of atavism. According to the same author, it would still be a spontaneous production, as in the singular case cited by Hales, and since referred to by numerous authors, in which a variegated Jasmine, grafted on a common one, was stated to have communicated its variegation to the leaves below the graft, a circumstance which would be extraordinary. M. Moretti, cited by M. De Candolle, would appear to have concluded from this fact that the variegation is a malady which is capable of being transmitted in all directions in the tree. The physiologist of Geneva, in speaking in another place of variegation, only mentions the yellow and the white, regarding these colours as original, primitive, and preserved in one part, while the green is developed around it. This view is, indeed, admissible as far as regards these tints; but not for the red, brown, or rusty colour, or even the white, which is found in those varieties of variegated trees which horticulturists designate tri-coloured. On a Euonymus europæus, with leaves margined with white, we have seen, it is true, that the youngest leaves, which were scarcely green, were already white at the margin, so that this margin quite preserves its original tint, that which it acquired at its first formation; but on the Acer, the Cratægus, &c., where we find red markings, these are of a subsequent formation, and do not indicate a primitive tint; it is evidently a colour which has been acquired. Moreover, we may add, that on Piper verticillatum we have seen the leaves developed green, and grow to their usual size with that colour; then, by-and-by, the nerves turned white, so much so as to present, when old, that variegation which we have designated under the name of reticulated variegation.

M. De Candolle remarks, that endogenous plants present pale longitudinal bands parallel to the nerves, while oxogenous ones have more irregular spots; a circumstance easily explained by the difference of the system of nervation in the two great orders of plants. This writer further adds, that these bands, or these spots, belong to parts in which the chlorophyll is not perfectly developed, either in quantity or quality, to be rendered green by the action of the sun. The direct cause of this phenomenon, says this physiologist, is entirely unknown. It is just this cause that we wish to discover.

We must, however, before detailing our observations, render full justice to the labours of M. Treviranus, of Bonn, who, in this investigation, as in many others, has thrown much valuable light on his subject. M. Treviranus first remarked, that in monocotyledons the variegations form bands parallel to the nerves; in dicotyledons, as in Carduus marianus, the white is produced on the nerves, while, in other cases, as in Aucuba japonica, the yellow spots are distributed without order. He also made the important observations that sometimes the variegation is visible on the upper face of the leaves, while the under face has none; and by examining a section, he discovered that the parenchyma of the first is only achromatic or colourless. Again; the whitened part is thinner than the green part, and the small cells are destitute of the green granular substance (chlorophyll), which causes them to appear like white spots aggregately presenting a pale surface. M. Dutrochet held that they only derive their white tint from the air which is contained in the pneumatic cavities. We believe, also, that M. Dutrochet attributed to this air, enclosed in the pneumatic cavities, all the forms of variegation. This view, however, though in part agreeing with the truth, is partly also opposed to the facts, as we shall show. It is true in this sense, that the variegation, as the natural white spots in Trifolium pratense, Arum italicum, Pulmonaria officinalis, Begonia argyrostigma, &c., are caused by the air, or a gas; but it is not true in this sense, that it is pneumatic cavities (lacunæ) which enclose that air. Because a leaf is deprived of its white spots by submersion in water, and the extraction of its air by the pneumatic apparatus, M. Dutrochet concludes that that air exists in particular cavities. We are not of this opinion, because the microscopic study of the plants we have just instanced has proved to us that that air sometimes exists in the minute cells (cellulæ), and sometimes in intercellular passages (méats). The cavities in leaves are found, as is well known, especially in the inferior mesophyllum (the inferior system of the diachyma), and it is not this inferior surface which presents these spots, and other markings in particular: on the contrary, the superior system of the diachyma, or the superior mesophyllum in which the cellulæ are prismatic, much compressed against one another, and filled with chlorophyll granules, is the surface especially on which the albine discoloration is almost always found: it is the non-lacuniferous portion. The phenomenon cannot, then, be considered according to M. Dutrochet's view.

M. Treviranus offers better reasons for regarding variegation as a true malady produced from weakness (astheny); for plants which are variegated with white and yellow, grow more slowly, are more susceptible of cold, more readily acted on by frost, and a humid atmosphere; they flower less profusely and less frequently than other plants, nor do they bear fruit so often or so plentifully. He observes, however, that there are species in which, notwithstanding their variegation, vegetation is vigorous, as in the Aucuba japonica. He also remarks that Pulmonaria officinalis grows in several localities without spots, and that Lamium maculatum has its first leaves in spring spotted with white, while these spots disappear in summer. We believe that this phenomenon is of a different nature to that of variegation, and that it is not dependent on the same law. We have studied the spotting of leaves with some care, and we have seen, indeed, that this phenomenon is of quite a different kind to that of variegation, both in respect to the plants in which it is found, its anatomical cause, its position, its physiology, and other incidental circumstances.

M. Treviranus observes, in respect to variegation, that Nature alone can produce it, and that art cannot accomplish it. But he is contradicted in this by M. Sageret. Art preserves and propagates by budding, layering, or grafting what Nature has produced. But it is difficult to determine the cause of variegation in a tree growing in a forest, when the others surrounding it, growing in the same soil, the same air, and light, have none. To this reflection we may add, that those who think that variegation is always traceable to an initial etiolation, preserved and propagated afterwards to the neighbouring organs, cannot maintain their opinion with any advantage; for it is by no means rare to find light, or partly white leaves on the Rubus, growing where it is fully exposed to the sun. We know an instance near Liege, of an Æsculus Hippocastanum having a branch with variegated leaves; this branch grows exactly at the south side, and is not shaded at all by the other branches, or the surrounding trees. Miller also cites a curious case: as is well known, there is a variety of Sempervivum arboreum with leaves margined with white; this was first obtained at Badminton, the seat of the Duke of Beaufort; a branch accidentally broken and detached from the species with green leaves, after having been a little dried, was planted; and on beginning to grow, it was found to have the new leaves variegated. Notwithstanding the authority of Miller, the fact mentioned seems to require confirmation. M. Treviranus regrets that the soil in which the shoot was planted has not been described; for there are some facts which indicate that here the soil exercises a very remarkable influence. Burgsdorf, cited by M. Treviranus, relates the following:—"Certain snails had [partially] eaten the cotyledons and the bark of a Beech; but it survived this mutation: the second year its leaves were variegated; the third year it was transplanted into a better soil, and there, by degrees, lost its variegated leaves. The Professor at Bonn made several observations, from which he affirms that trees with variegated leaves, by being transplanted from a poor to a rich soil, return to a uniform green; so that, according to his view, this phenomenon is connected with a particular debility in the vegetable juices, brought on by a diminution of the absorption in the root, and which does not permit the parenchyma to assume the green colour by the influence of solar light."

Such are the facts and such is the theory cited amongst the best physiologists of the day, with the exception of the memoir of M. Sageret, of which we shall speak hereafter. Owing to peculiarly fortunate circumstances, we have been able to study the phenomenon of variegation under a general point of view. Messrs. Henrard and Son, nurserymen at Liege, have been interested in variegated plants for upwards of thirty years, and have collected in their establishment at

St. Walburge every variety of tree, shrub, and herbaceous plants with variegated leaves, which they have been able to procure. Their nursery thus forms a real botanical hospital, in which, however, far from trying to cure maladies of paleness and astheny, they rather endeavour, by all means, to increase their number, and preserve them.—(*From Dodonæa, Observations Botanique.*)

A NOTE ON VARIEGATED PLANTS,

BY MR. J. R. TANTON.

AMONG the numerous sections of plants grown for decorating purposes, the "variegated-leaved" rank as one of the most interesting and beautiful; and I think the fine collections of them which were brought to the Chiswick and Regent's-park Exhibitions the past season most fully confirm, forming as they did a very striking and handsome contrast to the general showy flowering classes; therefore, without presuming to dictate what will be admitted into or rejected from general estimation, I hope to be allowed to offer a few remarks in behalf of these useful and truly beautiful plants.

Every person connected with the Horticultural world knows what very valuable plants they are at this season, and likewise throughout the winter months, for decorating our glass establishments. Taking the stove into consideration, what looks more cheerful than a variety of variegated foliage intermixed with the few flowering plants that are afforded us at this dreary season. There are a few species of the Crotons deserving a place in every stove; likewise several of the Gesneras, the Echites picta (Campylobotrys discolor), Justicia picta, Spiranthes cerine, and a many of the Bromeliaceous order, not excluding the beautiful striped "Zebra-plant" (Calathæa Zebrina). These, and a host more, too numerous for me to be allowed to mention here, will bear the temperature of our plant-houses, from the stove down to the hardy house, where intermixed with various other plants, cannot but be admired. The hardy variegated plants for the decoration of our lawns, boundaries of flower-gardens, belts, &c., are but very limited; but though it is so, I hope they are not totally forgotten by our Horticulturists. A few of these valuable plants used for "bedding purposes" would be found a great addition to the ornamenting of our gardens.

I am glad to have to state that a new and very valuable variegated-leaved plant (a charming acquisition) has been brought to my notice, and which will be offered to the public next spring, viz. the *Dahlia* (*Maculatæfolia*), whose golden-blotched foliage contrasted with the pretty rose-coloured flowers, having the petals very distinctly striped with bright red in the mamer, but better formed, will be the admiration of all beholders of D. La Rosea. This very beautiful plant was raised last year by Mr. John Cordery, an amateur Florist, of Pound-place, who, in communicating to me, states "that plants have this season been grown in six different localities, in order to test its variegated properties," which he now finds to be quite constitutional with the plant, and under these varied circumstances it has proved all that could be desired. It is certainly one of the most strikingly handsome variegated plants that has yet appeared in our flower-gardens, and I beg to recommend it to all lovers of ornamental variegated-leaved plants.

In conclusion; I am so fully satisfied with the beauty and interesting appearance of a collection of this section of plants, that all who may grow even but a few species or varieties of them will not only approve of, but become increasingly pleased with them; and of course as the specimens increase in size, so they will in proportion become ornamental, and objects of universal admiration,

THE GENUS ÆSCHYNANTHUS,

BY MR. J. R. TANTON.

The British cultivator of plants when called upon to exhibit his skill, urged by the stimulation of honourable competition and reward at those meetings now so widely spread and so highly beneficial throughout the land, soon found that the Æschynanthus was well suited to his purpose, as presenting a pleasing aspect in exact proportion to the care bestowed upon it, and thus evincing most accurately his own capacity for the distinction aimed at. Plants of this genus are invariably seen at all the summer and autumn exhibitions and meetings of the votaries of Flora; and their beautiful habit presented on those occasions has so captivated beholders, that their culture has been carried into establishments where exhibiting at the public shows has not been thought of. All the species and varieties of Æschynanthus are beautiful, some exceedingly so, rendering them essential to every stove collection, and will most amply repay for any care and management required. As may be supposed, amongst an assemblage of plants so extensive as occurs in this genus, there are some less deserving of regard than others; those considered the best, however, I shall enumerate below.

It is not long since a common error prevailed in the idea, "that air plants, and others of resembling character, were mainly inhabitants of the depths of the thickest forest;" and hence arose the practice, in our own country, of providing them with a dense shade, as being essential to their successful culture; but a better knowledge of the "physical geography" of the countries whence they came, and a more careful attention to the habits of the plants, have brought about the results to be expected, and the production of flowers is now as much a matter of certainty as before it was precarious.

The Indian Archipelago, and particularly the Islands of Borneo and Java, appear to abound with these plants, where they flourish in company with, and in the same manner as, the "Epiphytal Orchids." Dead and living trees, on the *margin* of forests, are clothed with them, and many trees are laid prostrate with these and similar vegetable beings; therefore, with a little before-consideration, the cultivator will not find any difficulty in the successful cultivation of the entire genus. All the kinds are of the easiest cultivation and propagation. Pieces of the young wood, from three to five joints in length, taken off any time in spring or summer, strike root with facility when potted in sandy peat, covered with a bell glass and plunged into a moderate bottom heat. If this be done in April or May, the cutting will have emitted roots sufficiently to be separated, and potted off singly in three weeks or a month; potting them in sixty-sized pots, with a good drainage, well covered with moss and then filled up with "fibry sandy peat," intermixed with rotten wood and charcoal, broke or cut very fine. Pot the plant very high, so that the base of the stems be a little higher than the rim of the pot; give them a gentle watering, and return them to the bottom heat. During the remainder of summer, a mean temperature of 80°, with abundance of moisture, should be kept about them. The tips of the shoots should be pinched off, to render the plants bushy. As it regards watering, it is not the drenching from the water-pot that is wanted, but produce moisture in the *form of vapour*, as those plants derive as much nourishment through their leaves as from the roots. The best means of supplying them in the requisite manner, is to plunge the pots into the back bed of a stove, and cover with a hand-glass; or in a hot-bed frame, and cover in the same way. This prevents evaporation, and by keeping a close, damp atmosphere, renders a slight syringing once or twice a week sufficient. By continuing this mode of treatment till autumn, the plants will have grown considerably, and by the arrival of dull weather will have become dwarf bushy specimens; they are then to be kept *dry* and *dormant* till spring.

The majority of the species, if left to their natural impulse, will bloom through autumn and winter, therefore those required for blooming in summer should be started in January, but those that are desired for a later blooming should be started the beginning of March. As they have hitherto been in small pots, it will be necessary to re-pot them, but they should be plunged in a brisk heat a fortnight or three weeks previous, and water sparingly so as to excite the roots a little before repotting. Avoid a large shift, and use the following compost. Rough fibry peat, charcoal, moss and rotten wood, with a little sharp silver-sand added; also have a liberal drainage. Keep the base of the stem level with the rim of the pot. During the next three or four months they should be grown as fast, having a mean temperature of 80°, and abundance of moisture. Through the first half of this time the shoots should be kept stopped, which will increase their number as well as the flowers.

By the middle of May the earlier plants, being from six inches to a foot in length, must be allowed to cease their activity, and water must be gradually withheld, and the plants be freely exposed to the air. When quite ceased growing, place them on a sunny shelf in the stove, giving little or no water till they have set their flowers, which may be expected in the course of a month, and then they may be more liberally watered to bring out the blossoms vigorously. When their floral

DESCRIPTIVE LIST OF STOVE AND GREENHOUSE VARIEGATED-LEAVED PLANTS.

These most interesting plants are now attracting much attention; and as a guide to persons desirous of procuring such, we insert the particular descriptions of the most ornamental which have come under our notice. Great care has been taken in having correct particulars.

Cissus discolor.—It is a climbing-plant of great beauty, and succeeds admirably around a wire framework or pillar. The young shoots are of a dark red colour, and the long tendrils are of a deep rose. The leaves are from 6 to 8 inches long, and from 3 to 4 broad, tapering to a point. The under side is of a dark reddish purple, and the colours of the upper surface are disposed as follows:

First, there is a velvety band, with an undulating margin down the centre, of a rich violet-purple colour, covering about one-third of the surface, widest at the base, and tapering to a point. From this branches forth smaller bands down the side ribs, olive-green, and becoming beautifully interlaced at their extremities. The spaces betwixt these ribs are raised, giving the leaf the appearance of having been embossed, and in colour a silvery pearl-white. With the young leaves there is a slight tinge of lake near the central band. The entire leaf has a narrow margin of lake. These large and truly beautiful leaves have a peculiar "metallic" hue, and it is by far the most strikingly handsome variegated-leaved plant that has been introduced into England.

Dracena maculata.—A very pretty plant, each leaf being about 8 inches long by 3 broad, of a dark olive-green, with very distinct spots of *bright green*, and in the centre of each is a dark dot. The leaves are very thick, and very beautifully marked.

Dracena ferrea versicolor (Synonyme, D. terminalis).—This is an erect growing plant, and if allowed to proceed without the lead being stopped, would, no doubt, become several yards high. Small plants, however, will bloom, and by stopping, the plant may be formed to a bushy one of three or four feet high; but whether it has but one head, or several, it is a most beautiful object, and highly ornamental. The leaves are somewhat in the form of those of a Canna, each being, when full grown, from eighteen inches to two feet long, and from six to eight broad. We recently saw a plant about five feet high, the stem had fine foliage from the edge of the pot to the top, which had *a head* of young, "but large," leaves. The plant, in all its stages of growth, has an assemblage of the young leaves, which compose a plumed head, diverging on every side, of carmine, lake, and bright green, in broad or narrow stripes. As the leaves become older, the green turns to a dark olive suffused with brown, and the vivid carmine and lake changes to deep red and purple. It merits a place in every stove, or warm conservatory.

Dracena nobilis.—This, too, is a magnificent erect plant. The leaves are very large, of a rich vermillion, crimson, and purple, striped with green, rendering it highly ornamental.

Dracena ferrea.—An erect plant, with large leaves, of a dark purple, slightly suffused with brown when young.

Hoya variegata.—Leaves dark green, with a broad band of yellow next the green, and the margin a creamy white.

Hoya picta.—When the leaves are young, they are of a beautiful rose-colour upon a pale yellow ground. When full-grown, they are of a deep yellow, with a very distinct margin of green. It is exceedingly handsome.

Caladium hæmatostigma.—Leaves large, somewhat in the form of those of the Calla æthiopica, but are what is designated arrow-head shaped; green with irregular white marks, each of which has a rosy-crimson blotch in the centre. It is singularly pretty.

Caladium picturatum.—Leaves arrow-head shaped, each six inches long and three broad at its widest part; of a bright green, with a handsome rose-coloured broad stripe up the centre of the leaf, and diverges on each side up the lobes, so as to have an arrow-head appearance. It is very handsome.

Caladium bicolor.—This was formerly called Arum bicolor, a well-known stove plant. Leaves medium sized, green, with a large part of its centre suffused with deep red. Pretty.

Caladium bicolor splendens.—Leaves of a similar form and size to the last-described; but the centre colouring is more brilliant. Very handsome.

Caladium pictum.—Leaves seven inches long and five broad, of similar form to the other kinds. When young, they are green, with large irregular-shaped white patches; but afterwards the patches become yellow. It is very handsome.

Caladium.—New species from Bornea; the leaves and stalks are almost black, very strikingly distinct.

Caladium atropurpureum.—Leaves (arrow-head shaped too) two feet long and one broad, green, footstalk of each two to three feet long, of a purple colour, the strong ribs at the underside of the leaves are also of a purple colour. A noble and handsome plant.

Consigna borbonica.—A very handsome shrub, the leaves being nearly a foot long and two inches broad, of a rich green and yellow colours. The midrib and margin are yellow, and on each side of the midrib are irregular-formed broad patches of green, separated by yellow lines, &c. So beautifully are the markings, that in some leaves the yellow predominates, and in others the green; but all are handsome.

Campylobotrys discolor.—Leaves oval, four inches long and three inches broad, and of a velvety-green with *bright green* veins. The former-named portion rises high above the hollow bright green veins, and appear as if they had been mechanically embossed. They are very pretty.

Calathea zebrina.—This has long been known with us as "Maranta zebrina," or "Zebra-plant." Its large rich green leaves, regularly striped with velvet, are very handsome.

Maranta roseo-lineata.—Its large rich green leaves are very handsomely streaked with a rich rose colour. It is exceedingly pretty.

Maranta albo-lineata.—Its large green leaves are beautifully streaked with white, contrasting well with the last two described plants.

MARANTA VITTATA.—Leaves large, dark green with yellow stripes. Very handsome.

MARANTA PUMILA.—A dwarf-growing plant, leaves green, beautifully striped with white.

MURANTA. NEW SPECIES.—Leaves ten inches long and six broad. The under side of a rich reddish-purple. The upper side bright green with silvery-white stripes. Very handsome.

ECHITES PICTA.—A climbing plant. Leaves five inches long and three-quarters of an inch broad; green, with a silvery-white midrib. Very pretty.

DIOSCOREA DISCOLOR.—The YAM of the West Indies is Dioscorea sativa. The D. discolor has heart-shaped leaves, eight inches long and six broad. The under side is a rich puce colour, and the upper a light green, prettily marked with dark olive-green.

·ELÆODENDRON INDICUM.—Leaves a foot long and four inches broad, a pretty light green, with very dark network-like (reticulated) veins. Very handsome. The fruit of this small tree-like plant is much like that of the Olive.

ŒSCHYNANTHUS VARIEGATUM.—Leaves oval-shaped, four inches by two. The under side is of a drab colour, with numerous irregular-formed blotches of a rosy plum-colour. The upper side is of a vivid green, beautifully mottled with irregular blotches of very dark green. Very handsome.

ERANTHEMUM LEUCONERVUM.—Leaves oval, three inches long by two broad, a dark green, with silvery-white, embossed-like midrib and side ribbed veins. Very pretty.

JUSTICIA ZEBRINA.—Leaves oval-shaped, eight inches long by four broad, dark and light green, the former portion of which has an embossed appearance. The veins on young leaves are of a rosy-red, but afterwards changes to white. Very handsome.

MARANTA SANGUINEA.—Leaves eighteen inches long and eight broad, green above, and the under side of a deep blood-colour.

CENTROSOLENA PICTA.—Leaves oval, three inches long by two broad, light green, with a broad dark green margin. Neat and pretty.

PLECTRANTHUS CONCOLOR PICTA.—Many of our readers know the commonly-grown Plectranthus fruticosus of the cottage window. The leaves of this new and handsome plant are of similar size. When young, they are yellow, then become light green, and finally a dark green. In the centre of each leaf is a large irregular-formed patch of a ruby-red colour, which has a very striking appearance, especially on the young yellow and light green leaves.

ERIOCNEMA MARMOREA.—The leaves are oval-shaped, about five inches across, of a velvet-green, appearing as if embossed. The midrin, as well as about half an inch of each of the side ribs, are of a beautiful silvery-white. That portion of the ribby veins not white are of a pale green, contrasting prettily with the other colours. It succeeds best under a bell glass, or in a Wardian case, under which the colours are well defined and distinct. It is very handsome.

Aspidista lurida variegata, belonging to the natural order of Acoracea. The leaves are Lily-like, eighteen inches long and six broad, green, with broad and narrow stripes of white.

Eranthemum leuconervum.—Leaves oval, three to four inches long and three broad, of a dark green, beautifully marked with net-like silvery-white veins, very much in the way of Achimenes picta. The plant spreads over the pot, and the shoots hang over the sides. It is very handsome, and merits a place in every stove or warm greenhouse.

Desmodium. New Species from Java.—The D. gyrans is the moving plant, having narrow willow-like leaves. This new and grand species has green leaves, beautifully marbled with white.

Thunbergia Doddsii variegata.—The leaves are of a bluish-white, with a broad pure white margin. Very pretty.

Croton variegatum.—Leaves large, green, with a red midrib and yellow veins and spots. Very pretty.

Croton pictum.—Leaves large, green, with golden-yellow midrib and veins. Very pretty.

Hæmodictyon pictum (or venosum).—Leaves oval-shaped, upper side vivid green, marbled with velvet-green, and the numerous net-like veins are of a pale red, having a most beautiful appearance. The underside is a handsome purple colour. Exceedingly pretty.

Anæctochilus Lobbii.—Leaves a vivid green, with white veins, forming a beautiful network-like appearance. All the Anectochilus have leaves of thick substance.

Anæctochilus picta.—Leaves green, with veined network-like veins of red, yellow, and rose, with two green spots in the middle. Beautiful.

Anæctochilus Lowii.—Leaves bright green, with white network-like veins. Very pretty.

Anæctochilus setaceus.—Leaves deep green, with golden network-like veins. Very pretty.

Anæctochilus intermedia.—Leaves velvet-green, with bright green, with golden and reddish network-like veins. Very pretty.

Anæctochilus argenteus.—Leaves light green, with silvery netlike veins. Very neat.

Anæctochilus cordatus.—Leaves dark green, with golden and red netlike veins. Very beautiful.

Anæctochilus Goodya.—Leaves a vivid green, with silvery network-like veins. Very beautiful. An article on the cultivation of the Anæctochilus, by Mr. Burley, was given in our October Number. The plants are peculiarly interesting and beautiful.

Achimenes picta.—Leaves large, green, with silvery veins. Very beautiful.

Achimenes argyrostigma.—Leaves medium-sized, green, with silvery dots. Pretty.

Begonia argyrostigma.—Leaves large, green, with numerous silvery dots. Pretty.

Begonia zebrina.—Leaves ear-shaped, eight inches long and four broad, in shades of light green, and very dark greenish-purple. Pretty.

Gesnera zebrina.—Large leaves, bright green, marbled with velvety-green. Pretty.

Hydrangea japonica.—Leaves similar in form to the well-known Hydrangea hortensis, rich green at the centre of the leaf, and the entire beyond is pure white. It is exceedingly handsome, and deserves to be in every greenhouse and sitting-room. It is thought to be hardy enough for out doors in warm and dry situations.

Dichorisandra. New Species.—Leaves six inches long and two broad, deep green, with two red stripes the entire length of the leaf, similar to a ribbon. Very pretty.

Tradescantia zebrina.—A trailing plant, the shoots hanging over the pot side. The leaves are bright green, striped with a very dark colour; the under side of the leaves a beautiful puce-purple. Very pretty.

Phyllathron Bogerianum. — A small tree-like plant. Each leaf is ten inches long and two broad, bright green about midway of the leaf; it is divided as if cut clean by a knife close up to the midrib on both sides, and it has the appearance of two leaves. The stems, branches, and leaves are marked irregularly with white, as if white paint had been scattered upon it. Neat and very singular.

Duranta Bonnarii.—A shrubby plant, the leaves of which are somewhat like our Althæa frutex, light green in the middle, and the other part white. It appears to be a neat growing plant, and very pretty.

Neottia picta.—Belongs to the orchideous tribe of plants. It is a dwarf-grower, almost in the way of the Lily of the Valley; each leaf is eight inches long by two broad, of a silvery green, striped, and spotted with a very dark colour. Pretty.

Graptophyllum Hortense.—A small tree-like plant. The leaves are almost like those of a common bay-tree in form and size, but they have the substance of a Camellia leaf, of a rich green, with an irregular-formed yellow patch upon it; but this marking does not extend to the edge of the leaf. It is by some termed the "face plant," in consequence of parts of the side features of the face being shown in parts of the yellow outline.

Tillandsia acaulis viridis.—The plants of this genus are very like small Pine-apple plants of a dwarf growth. This species has pea-green leaves, with silvery stripes or bands crossways of the leaves.

Tillandsia acaulis zebrina.—The leaves have a chocolate ground, with silvery cross bands.

Tillandsia acaulis.—A darkish green ground, with silvery cross bands. Each kind is pretty and very interesting.

Coronilla glauca variegata. The foliage is of pretty pinnate leaves. The centre of each leaflet is green, surrounded with a broad pale yellow margin. It is very pretty.

POMPONE (*or Minima*), CHRYSANTHEMUMS.

BY MR. JOHN BURLEY, OF WELLINGTON-ROAD NURSERY, ST. JOHN'S WOOD, LONDON.

OWING to the very great improvements that have been effected within a short period, and that occur with each following season in this most charming section of autumnal flowers, I am induced to forward for insertion in your Magazine a descriptive list of some of the best and choicest varieties which have been sent out up to the present time; also a few of the principal particulars relative to a successful management of the plants. If you deem them worth insertion, I feel assured the detailed remarks and list of varieties will assist those readers who are desirous to grow and bloom them satisfactorily, as well as be of use in making a good selection from those new varieties which they have not seen in bloom.

Each successive spring there are numerous new hybrid productions in certain classes of plants; and in none has there been such a striking improvement in so short a period as has been accomplished in this section of Chrysanthemums. With it, as is the case with other classes of hybrids, there are some new varieties sent out that do not meet general approval, though such were most probably thought well of by the raisers. To prevent such unnecessary expense, and any vexation through disappointment arising from having obtained an inferior flower, I shall here give a list of what are, in our own country, admitted to be of first-rate merit.

The general particulars of management are the following:

In the beginning of March select strong suckers from the old plants, and pot them singly in small sixty-sized pots, in a light *rich* soil, place them in a frame or pit, and keep for a fortnight or three weeks rather close and shaded, in order to promote an immediate striking of fresh roots into the soil; then grdually harden them off to bear the open air. As the pots get filled with roots, repot the plants from time to time in larger ones. Let the leads be stopped, in order to promote the pushing of side-shoots, and have bushy stiff plants. This attention to stopping must not be done after the first week in July, for shoots made much after that time will be too late to produce a satisfactory bloom, if ever any flowers at all. If there be more side-shoots push than is required, just to have the plants *bushy*, and at the same time open, not crowded, thin them, cutting clean away all the unnecessary ones. By a little careful attention to stopping the leads and thinning the shoots, well formed dwarf bushy plants are produced, and when in bloom their appearance is far preferable to the tall grown unsightly ones; more particularly so with this charming section of Chrysanthemums, their small, Ranunculus, and Anemone-like, beautiful flowers, are in harmony only with dwarf bushy plants. Such are as readily produced as the tall lanky ones, only taking care to stop the leads at the proper time.

When planted out-doors, if frost set in whilst they are in their beauty, they may be taken up, potted, and removed to the greenhouse, where they will bloom without having been injured by removal, if but a liberal supply of water be given to the roots.

The beauty of the Pompone, or Lilliputian Chrysanthemums, is not merely in their peculiar neatness of form, in the blossoms, or loveliness of colours, but in the *profusion* of flowers, and the early period of their blooming. They are generally in bloom three or four weeks earlier than the *large flowered* section are, thus obviating the complaint made against the latter class relative to the blossoms being damaged by casualties at a later period, as by frost, excess of wet, powerful winds, &c. The Pompones being so much earlier, are in their beauty previously to the usual severities of the autumn season.

The following are the best varieties, all of which are entitled to a place in every collection of these pretty flowers:

Bijou de l'Horticulture.—Flower white, with a straw-coloured centre. Excellent form, well up in the centre. One of the best.

Drine Drine.—Fine yellow. Form excellent, being much like those of Exquisite. It is decidedly the best of its class, as it possesses the good qualities of a dwarf habit, and a profuse bloomer.

Madame Hector Jacquin.—Pure white, and the petals have a beautiful feather-like appearance. Flower large for its class, and very striking.

Princess Mathilde.—Beautiful pearl-white. Dwarf habit, and profuse bloomer.

Madame Rousselon.—Beautiful rose-colour, and of superb form, being quite a globe when fully open. Of dwarf habit.

Colombine.—Cinnamon striped with yellow. It is quite a novelty, producing a charming appearance. It is a profuse bloomer, and ought to be in every collection.

La Vapeur.—Creamy-white, shaded with light yellow, very pretty.

Aramis.—Beautiful deep rose-colour, and forms quite a globe. An excellent variety.

Cedo Nulli.—Pure white, of excellent form, and of the largest size in Pompones. It has an anemone centre. Should be in every collection.

Atala.—White, tipped with pink; well up in the centre, and very handsome.

Grand Sultan.—Deep rose-colour, with a white tip, forming quite a ball. A profuse bloomer, and very beautiful.

Madame Jules d'Evry.—Delicate light rose, with a yellow centre. Very pretty.

La Rousse.—Deep orange-colour, small flower, but of excellent form.

Graziella.—Beautiful light rose, excellent form, well up in the centre, a profuse bloomer, and ought to be in every collection.

Hendersonii.—A good orange-yellow; dwarf habit, and is a profuse and very early bloomer.

In addition to the above new varieties of this year's sending out, the following of last year are very attractive and superb varieties. I merely give the names, the descriptions may be found in any nursery catalogue of flowers:

Adonis, Asmodee, Calibree, Argentine, Autumna, Tenella, Anais, La Gitana, Modele, Sacramento, Surprize, Solfaterre.

Superb varieties of the large-flowered class, viz., *Chevalier Domage*, fine yellow, a very large and superb flower. *Alebaide.*—Orange-yellow, of exquisite form.

Old Superb Varieties.—Annie Salter, Cloth of Gold, Pilot, Lady Talfourd, Mount Ætna, Peruvienne, The Warden, Queen of England, Jenny Lind, Madame Laborde, Pio Nino, Voltigeur.

REVIEW.

A Garland of the Months. By Mrs. Milner. 12mo, pp. 242. Binns and Goodwin, Bath.

This neat little garland has been woven with great taste and judgment, and will, we feel assured, be perused with pleasure by every lover of Nature in "the garden, the grove, and the field." The talented authoress has succeeded in producing a very interesting book, containing a great variety of information concerning animated and vegetable nature, as displayed throughout the year; the whole written in a delightful style. We need but say we heartily recommend it. The following selections will show Mrs. Milner's style.

"Of flowers, not many venture to put forth their blossoms during the severe cold of January. We seem to hear

* * * 'through the leafless trees,
A dirge-like moan in the passing breeze;
Sighs breaking in on nights' silence deep,
From Nature's breast, while her children sleep.
She mourns that the rose's scent is fled,
She weeps that the lily fair is dead:
For the waving corn in the golden fields,
For the purple clustre the rich vine yields.'

"Some few field plants, however, may now be seen in bloom; and in the garden, even in January, if the weather be mild, the snow-drop (*Galanthus nivalis*); the yellow crocus (*Crocus aureus*); the garden anemone (*Anemone hortensis*), and some other flowers, sometimes in the south of England, or in warm situations, 'broider the ground:' the snow-drop in particular.

"'The first pale blossom of th' unripened year,' has ever been an especial favourite with poets and florists. Though we have mentioned it as blooming, under favourable circumstances, in January, it was formerly called 'The Fair Maid of February;' and, though now to be met with in every cottage garden, Evelyn speaks of it as being in his time, rare; and calls it 'The Snow Flower.' Its botanical name, *Galanthus*, is derived from two Greek words, signifying milk and a flower. The snow-drop, with its exquisite grace of form, and its surpassing delicacy of colour, is popularly and naturally regarded as an emblem of purity. It may also be viewed as a symbol of the resurrection; rising, as it does, from amidst the death of winter.

"Seeing, lately, two opening snowdrops, the one at the head, the other at the foot of a grave on which the snow lay like a heap of white drapery, I was reminded of the two angels that the weeping Mary Magdalene saw, where the body of Jesus had lain. The heap of drifted snow brought to my view 'the linen clothes lying;' and the spotless flowers spoke to my mourning soul the words of the angels in shining garments, 'Why seek ye the living among the dead? He is not here, but is risen as he said.'"—p. 5.

"The hum of the honey-bee is peculiarly agreeable; perhaps, as suggesting the idea of cheerful and useful labour. When the busy worker alights upon a flower, her hum ceases, but is resumed again as she flies off with her booty. The most sonorous insect-hum belongs, perhaps, to the large humble-bee, whose booming, audible at a considerable distance, becomes sharp and shrill as the insect approaches the listener's ear. Even the trumpet of the gnat, although suggestive of a poignant sting, is pleasant when heard in an insect-chorus at noon or eventide, when the joyous creatures, glittering in the summer air, meet together for merry pastime. Whole troops, however, of stingless insects may be observed, especially towards sunset, during the month of August. These ephemeræ, distinguished by their spotted wings, assemble in multitudes for their evening gambols, often near streams or ponds; or in the neighbourhood of hedges and low trees. Now, they rapidly beat the air with their wings, till they attain to an elevation of four or five feet, and then descend again with their wings motionless and expanded. Like other creatures of God, these tiny insects are curiously made, and their organization is admirably adapted to the restless lives they are designed to lead. If you look carefully at them as they float up and down, you will observe that they uniformly elevate their three long tails, and that the two lateral ones are so separated as to form nearly a right angle with the central one. These tails seem given to them to balance their little bodies when they descend in a horizontal position. So agile are their movements, and so wonderful their instinct, that, should a heavy shower suddenly fall, they are enabled to steer unharmed between drops larger than their bodies, and which, if come in contact with, would dash them to the ground.

"Some of these ephemeræ often exhibit a brilliant appearance. Seen in the shade, they seem like a cloud of 'dark shadowy atoms,' alternately rising and falling in shapes the most fantastic; but when viewed in the bright sunshine, the spectator might almost fancy that its beams were showering down myriads of glorious creatures, 'that in the colours of the rainbow live.' Some look like little dancing pearls; others appear to be clad in bright armour. Some glitter in green and gold; others reflect other prismatic hues; and others again sparkle like emeralds or diamonds.

"These and other bright and beautiful insects, which make their first appearance in March or April, and continue to people the air so long as the beams of the sun have sufficient power to cherish and invigorate them, are peculiarly numerous during the month of August"—p. 134.

MISCELLANEOUS SECTION.

Heating a Greenhouse with Gas.—Dr. Lindley's caution, in last Number, is appropriate in reference to the use of gas, as detailed. We have seen it used instead of coal or coke, in the hot-water pipe system of heating a greenhouse eight yards long, and it answered every expectation. The small boiler, "an ornamental one," was placed at a front corner, and the flow and return pipes (three inches bore) extended along the front. The gas was lighted in the fire-place, out of sight from any person in the house, and the water in the boiler was soon sufficiently heated, and the house a nice temperature. The gas was turned on towards evening, and allowed to burn till bed-time. It might, however, have been kept burning, with perfect safety, all night, if requisite. There is, of course, a fume from the gas as it burns, and a pipe was extended from the fire-place outside the back wall of the house, and through this chimney the fume escaped. The cost of construction was but a few pounds, and the expense of the gas from 4*d.* to 6*d.* per day, even when used several hours. The gas was brought from the adjoining street supply-pipe. It is not necessary the stove should be in the greenhouse; where there is convenience outside, it would be best to have it there, and the pipes enter the house through the wall, as usual in the hot-water pipe system. Where gas can be had for the purpose we have stated, nothing can be better or cheaper for a greenhouse, pits, &c. There is no trouble in fire-lighting, of coals, coke, &c., and its heat is at immediate command.—CONDUCTOR.

CULTURE OF THE POLYANTHUS.—In our last we gave an extract from the "Midland Florist," the following is a continuation. "After planting, the surface of the bed is stirred an inch deep, except close to the plants, as there the soil must be pressed very compact, and more soil added for the purpose. This being done, moss, well dried before a hot fire, is closely packed all round the plants, so as to keep the leaves upright through winter. A piece of glass is fixed on four supports over each plant, to prevent water getting into the heart." On growing Polyanthuses in pots, the Author remarks: "Having grown them for nearly thirty years, I find the best time for propagation is the last week in July and first in August; and for potting the general stock of plants, the last fortnight of September. At this time," he observes, "each heart will be found to have formed for itself a new joint, or base, from which fresh fibres are produced, and the main root usually fibreless and approaching decay." He cuts away the old main root, and the new roots are depended upon for growth. Before potting, he prefers to grow them a few weeks in the open bed, and then be removed into pots. He uses *fresh* fibrous loam, cut about three weeks before using, having it well broken and exposed to the sun; and to it is added a quantity of charred vegetable matter, or wood ashes, well rubbed together. He also uses decayed cow manure, mixed with one-eighth of charred vegetable matter, and one-eighth of shingle, or grit sand. The plants are put into a frame in November, for winter preservation. The following are twelve of the best varieties:

Hufton's Lord Lincoln.
„ Traveller.
„ Earl Grey.
Addiss's Kingfisher.
Oliver's Cheshire Favourite.
Barrenger's Prince of Wales.
Buck's George IV.
Bullock's Lancer.
Crownshaw's Exile.
Pearson's Alexander.
Brown's Freebloomer.
Nicholson's King.

FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

THE Chrysanthemum is the most valuable plant we have for autumn decoration, either for the greenhouse or the flower-garden; it fills up a blank that no other plant we have could do. It supplies a profusion of beauty of almost every colour. It has become a desideratum in all well-managed flower-gardens, having the facility to plant a proper proportion of the most showy kinds, which ornament them, when the season keeps open, up to December. This autumn the rains have injured them. In order to have the flower-garden lively as possible, the succession to Chrysanthemums must be made up with evergreen shrubs; it is readily done at a trifling cost by plunging in potted plants of Laurustinus, Aucuba, myrtle-leaved, broad-leaved, and variegated Box; gold and silver-striped, green-leaved, yellow and crimson-berried Hollies; Arbutus, Rhododendron, Mahonia aquifolia, Phillyrea, Arbor vitæ, Bay, Kalmia latifolia, dwarf Laurels, Daphne pontica, Cedars, Cotoneasters, &c. A garden thus furnished produces a very cheering appearance; and those who have not seen one so ornamented cannot adequately conceive of its beauty and finished neatness. This attention most amply repays for the small expense, producing a lively appearance, instead of having bare beds for several months. If any Tulip-bulbs be still out of ground, plant them as early as possible.

There are a number of very handsome single and double varieties of Anemones, which are highly ornamental to a flower-garden, whether in patches in the beds, or as an edging. To bloom well next season they must be planted immediately.

The Gentiana acaulis is a most charming spring flower, suited admirably for edging or patches. Its intense blue flowers, in contrast with Anemones, Hepaticas, and similar early-blooming plants, is very striking. Attention will be necessary to protect the tender kinds of herbaceous by a layer of dry leaves, pots, boughs, or branches of evergreens, &c., also the stems of tender climbing and other Roses, by tying a covering of furze over them, that, whilst it fully protects, admits sufficiency of air for the well-being of the plant.

Auriculas and Polyanthuses require plenty of air in fine weather, and but little water. The like attention will be required to Carnations, Pinks, &c., kept in pots. Dahlia roots should be looked over, to see if any are moulding or likely to damage. Let the roots be dry before they are laid in heaps. Newly-planted shrubs should be secured to stakes, so that they are not loosened by the wind. Where it is desirable, reduce patches of border flowers to a suitable size. Ten-week Stocks and Mignonette, in pots for blooming early next spring, to adorn a room or greenhouse, must not be over-watered, and be kept from frost. A cool frame, well secured by soil or ashes at the sides, and plenty of mats or reeds to cover at night, will answer well. During hard frosts, if additional soil be required for flower-beds upon grass lawns, advantage should be taken to have it conveyed at the time, so that the turf may not be injured by wheeling. Pits or beds for forcing Roses, &c., should be prepared early in the month. Tan or leaves are most suitable, unless there be the advantage of hot water or steam. New-planted shrubs of tender kinds should have their roots protected by laying some mulch. Suckers of Roses, &c., should now be taken off and re-planted for making bushes, or put in nursery rows. Soils for compost should now be obtained. Beds of Hyacinths, Tulips, &c., should have occasional protection. Any roots not planted may successfully be done, in dry mild weather, till February. Sweet Violets: plant these little gems as much as possible along the sides of walks, near seats, rooms, banks, under trees, &c.; they are so highly fragrant as always to be acceptable, and more especially being early spring flowers. Encourage all the spring ornaments as much as possible: Crocuses are pretty flowers, always gay in sunshine, and give a peculiar cheerfulness to every place they occupy; never be sparing in quantity of them near a dwelling-house. Do not omit the first flower that awakes thee from the repose of winter,

> " A flower that first in this sweet garden smiled,
> To virgins sacred, and the SNOWDROP styled."

IN THE FORCING STOVE.

Aconites, Crocuses, Violets, Mignonette, Stocks, Tulips, Cyclamens, Narcissus, Lilies of the Valley, Hepaticas, Primroses, China Primroses, Persian Irises, Cupheas, Hyacinths, Pinks, Carnations, Tree Carnations, Heliotropes, Scarlet Geraniums, Salvias, Gardenias, Roses, Azaleas, Cinerarias, Jasmines, Honeysuckles, Deutzias, Rhododendrons, Persian Lilacs, Rhodoras, Ribes, Mezereums, Correas, &c., required to bloom from January, should be brought-in early in the present month. The plants should be placed at first in the coolest part of the house; never allow them to want water. Pots or boxes containing bulbous-rooted flowering plants, as Hyacinths, Narcissus, Persian Irises, Crocucuses, &c., should occasionally be introduced, so as to have a succession of bloom. Many persons who take a delight in growing Hyacinths or other bulbous plants, for adorning a room or window, in winter or early in spring, have been frequently disappointed by the abortiveness of some and weakness of others. This principally arises from the inablity of the plant to develop itself with a rapidity equal to the quantity of moisture it imbibes, on account of its upper surface being acted upon too immediately by the atmosphere; hence arises the necessity of covering the bulb. That such is a fact is evidenced by the admirable and certain success of nearly every bulb, especially Hyacinths, that is covered with about six inches of old spent bark or ashes. This or some similar light material should always be used. Even bulbs intended to bloom in glasses we prefer starting in the cold bark, and then transferring them to the glasses when the roots are about two inches long. Where such covering is not adopted, the pots or glasses should be kept in a dark place till the roots are two or three inches long, and then bring them to the light. Always use water for the glasses that is just aired; cold water gives a check which greatly injures the roots, and, consequently, the bloom. Cactus plants that have been kept out of doors, or in the greenhouse, should occasionally be brought into the stove for flowering, which gives a succession. If any of the forced plants be attacked with the green fly, a syringe with diluted tobacco-water will destroy them. If the leaves appear bit, and turn brown (the effect of damage by red spider), a syringe of soapsuds at the under side of the leaves is effectual to destroy them. The glutinous substance remaining, not only kills those it is applied to, but prevents others returning there. The old Eranthemum pulchellum, with its fine blue flowers, Justicia speciosa, Gesneriæ zebrina, Justicia pulcherrima, Aphellandria cristata, Poinsettia pulcherima, Cestrum aurantiacum, and Begonia fuchsioides, are fine winter ornamental blooming plants.

IN THE GREENHOUSE.

As much fire as will barely keep out frost will only be necessary, and for the purpose of drying up damp arising from foggy nights, or from watering, all possible air should be admitted in the day-time; but mind to keep the plants from damage by frost.

Fuchsias and greenhouse plants, intended to be inured to the open air, will require to have protection at the roots, and probably, for the first winter, over the tops too, by furze branches, canvas, wicker baskets, mats, &c. If greenhouse plants require watering or syringing over the tops, let it be done on the morning of a clear day, when air can be admitted; and towards evening a gentle fire-heat should be given. Calceolarias must be in a cool situation. Whilst in a cool and moist atmosphere, the shoots will often push at the underside numerous rootlets; where such are produced, they should be taken off and potted. Pelargonium plants for exhibition should be re-potted by the middle of this month; according to the size of the plants must be the pots. The smallest-sized pots in which plants are to be when shown are the 24's, eight inches in diameter, and the largest-sized are eleven inches in diameter. The plants need not be potted into these sizes now, but a size less, and in February be re-potted into their final pots. The plants must not be crowded together, but be kept apart. Cinerarias are often attacked at this season by the green fly; let the plants be placed in a hot-bed frame, and be fumigated with tobacco-smoke at the first appearance of the insects.

BRIEF REMARKS.

“The following were the only seedlings which obtained first-class certificates at the National Carnation and Picotee Meeting at Norwich, July 28th, 1852, and is extracted from the *Gardeners' Chronicle*:

PICOTEES.

HAIDEE (Fellowes').—A flower which has hitherto been shown as Fellowes' No. 51; a light purple, of remarkable bold and clean petals, not over full; edges as smooth as most varieties, although not yet *perfection in that respect*, and the colour well laid on.

Bridesmaid (Matthews') was similarly rewarded; it is of the same class, light purple, and in every respect on an equality with the foregoing, with *perhaps* the improvement of a smoother edge; for symmetry it would be difficult to surpass these varieties.

Lady Macbeth (May).—A heavy red; and when we assert it to be an *improvement* on Mrs. Norman, all will feel sure that its merits must be great; *except a better tone of white*, we know not what more can be desired.

Note.—Mrs. Norman is a heavy red Picotee, colour bright, and evenly laid on; petals well-shaped and fleshy; the form not to be surpassed, and the white good. But here is one surpassing Mrs. Norman. We would wish to know in what respect. Admitting Lady Macbeth to be of good form, petals well-shaped, fleshy, and very clean, what more can it have to excel Mrs. Norman? If it is of a more scarlety colour, it will only have this advantage over Mrs. Norman, and it has a very great drawback, wants *a better tone of white*, or, in other words, *the white*, which is one of the essentials of a Picotee, *might be improved*. Mrs. Norman does not seem at all times to stretch well in the North.—Editor.

Miss Puxley (Turner's) is of the rose-coloured class, and, although *far from perfection*, it is an addition to a class at present select. *Not in quality, but as respects quantity, as this class wants improving*.—Editor.

Lady Page Wood (Costar) is a full flower, with medium purple edge, and although not *considered first-class*, it may be grown to advantage. *Query.*—Can second-rate flowers beat first-rate ones? Suppose a pan of twelve was staged, cannot twelve first-class flowers be found after so many new first-class flowers have been added during the last few years? Can Lady Page Wood beat Cristabel, Giulio Romano, Alfred, Mrs. Norman, Duke of Rutland, Ganymede, Ophelia, Prince Arthur, Grace Darling (Marris), Prince of Wales, Jeannette, Lord Nelson, Mrs. Barnard, and others, catalogued as being fine, and which have obtained a number of first-class certificates; if not, how can a second-rate be grown with advantage by an exhibitor?—Editor of *Floricultural Review*.

Plan of Flower-Garden.—A constant subscriber from the commencement of the *Floricultural Cabinet* would feel grateful for any assistance the Editor or his Correspondents could afford her in remodelling a flower-garden. The ground is a grass circle, measuring eighty feet in diameter, in front of an old-fashioned, ugly, red brick house, surrounded on three sides by a hedge of evergreens, chiefly rhododendrons, shutting out a lane in front, the road to the house on one side, and the stable-yard, from which a paling divides it, on the other. The object of the constant subscriber is to keep as constant a succession of gay ornamental flowers during the year from the windows as possible. The aspect of the house is south, and the circular garden is rather more sheltered by tall trees than is quite desirable, though none hang over it. Any hint would be thankfully received, as the time for such operations seems passing.—*Bromley, October* 13.

Tree Pæonies (Moutan.)—The brief descriptions given below are from notes taken in Messrs. Standish and Noble's nursery, when the plants were in flower. As yet they have received no name. True, the Chinese names accompanied them, but; of course, it would be of little service to retain their nomenclature for every-day use in English gardens. We perceive, by a recent catalogue of the nurserymen above named, that they hope, in the ensuing season, to publish full descriptions of all of them, with names by which they may be known and inquired for. They are certainly noble-looking plants when in flower, and whether, as regards the individual size of the blossoms, or the variety and richness of colour, greatly exceed any hardy plants hitherto known in English gardens. We give numbers to the descriptions, corresponding with those attached to the plants in the nursery-beds to which they refer:

1. Not very double; rich purple.
2. Semi-double; deep red, black base to the petals.
4. Anemone-flowered; white; beautiful compact flower.
5. Fine double rose; compact and good.
6. Semi-double; white, base of the petals stained with purple.
7. Pale lilac; very fine.
8. Double; rosy lilac, shaded; very fine.
9. Deep rich purple; a splendid flower.
10. Semi-double; bright red.
11. Semi-double; French white, base of the petals stained with purple.
12. Clean, rich, light purple; fine.
13. Semi-double; Tuscan rose colour.
14. Very double; salmon pink, shaded off to French white; a magnificent flower.

15. Double; primrose colour; very fine.
16. Semi-double; bright red, almost scarlet; very beautiful.
17. Resembles the last, but the flower is larger.
18. Double rose, shading off to lilac; fine.
19. Semi-double; clear white; beautifully shaped; base of the petals slightly stained with red.
20. Semi-double; clear white; larger than the last, and with a deep purple stain at the base of the petals.
21. Very fine white.
22. Fine double rose.
23. Rosy lilac, shaded; fine.
24. Double purple; very large.
25. Double; very large; deep red; shape like a camellia.
26. Globosa—the largest, and most beautiful white.
27. Semi-double; dark lilac; base of the petals darker.
28. Double; beautiful clear white; Marattah-shaped; very sweet scented.
29. Scarlet; very large, distinct, and beautiful.
30. Peach colour, shaded; large, and very handsome.

From these brief descriptions it will be seen how various are these Moutans in the colour and character of their flowers. Even in their young state they were very fine, and gave promise then, when the plants became older, to be even much larger. Their foliage, too, is very fine and deep-coloured, forming an excellent background to the glaring tints of the blossoms.—*Gardeners' Journal.*

CONCRETE SURFACE WALKS.—I observe a correspondent, who has some walks thus constructed, states that they are objectionable in consequence of being hard; the surface does not yield in the least to the tread, and the rough pebbles make it painful to the feet. Now these defects are easily obviated. I had a considerable extent of walks formed in 1851 as follows, which have realised my utmost wishes. The soil was thrown out, and the surface of the substratum was scooped out, so that there was a steepish slope from the sides to the middle, so that the water could rapidly run from the side to the centre, where I had a good covered drain, and the space filled up two-thirds of its depth with rough broken stones, brickbats, clinkers, &c. Upon these a layer of small broken stones and rough gravel was laid, and the surface rolled quite even and firm. I must remark, however, the surface was formed so that the centre of a five-feet walk was five inches higher than the sides, which gave a sufficient inclination for rain to pass off quickly to the sides. Over this bed of gravel, stone, &c., I had a thick coating of gas tar evenly spread over by means of an even-edged board, upon which was regularly sprinkled fine gravel, none of its parts being larger than the seed of the flower-garden sweet-pea. The sandy part had been properly sifted from it. When it had been made somewhat even, a sprinkling of yellowish sand was given over the entire, and then it was evenly and firmly rolled with a metal roller. It is now two years since I had the walks constructed, and they remain as firm even, and retain the colour of the sand, as they did the first day of completion. There has not been one weed or any moss, &c., upon them, and I am persuaded will not be; and all they will require for very many years, I think, will be a slight sprinkling of the sand. The surface remains quite even, and though firm, it does not feel hard to the tread, and there is nothing with such a fine gravelled surface to affect the feet of any one. Where the ground is level, I have no occasion for any drain to carry away the water. In other places I had the surface of the substratum formed so that it inclined steeply from each side to the middle, and along the middle a good drain was formed to carry away the water. A few drains are formed from the side to the centre drain, so that the side accumulation of water is thus taken away. Although the gas-tar, and gravel would form an even surface without almost any stony substratum, still it would be liable to become too damp below, and the surface not endure so long a period as when there is a dry substratum.—*J. Benton.*

LIQUEFIED MANURE.—In fact, I see clearly that the liquified manure will enable me to produce my root crops at *5s.* per ton, and will very largely increase my other productions. We frequently make the drains run at five feet deep with our liquid manures. The liquor is coloured, but has only an earthy smell after filtration. One load of bullock or cow-dung *liquefied* will manure more land than four loads *dry*; it acts immediately, and gives a quick return. I have not the least doubt, that within fifty years our rivers and brooks will be used for irrigation and for drainage.—*J. J. Mechi, Tiptree Hall, Kelvedon, Essex.* [Its application to flower-beds, rose-gardens, &c., would be equally successful in promoting an increased vigour of growth, &c.]—*Editor.*

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